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A National Newspaper for Every Branch of the Industry

Automotive Daily News

★CARS★ SHOP EQUIPMENT TRUCKS ★★AVIATION★★ PARTS ACCESSORIES ★TIRES★

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FACING FIGHT ON HIGHER GAS DUTY

Opposition Developing On Plan of 50% Ad Valorem

Special from A. D. N. Washington Bureau

WASHINGTON, Feb. 20.—The proposal of the petroleum industry for a 50 per cent. ad valorem duty on gasoline faces a severe fight in the Senate when that body reaches consideration of the minerals section of the new tariff measure.

Motor vehicle owners in the United States now use upward of 14,000,000,000 gallons of gasoline annually, or more than 80 per cent. of the total gasoline production.

The organized motoring representatives claim that the imposition of a high tariff on imported gasoline will be used as a lever by the petroleum interests to increase the price of domestic gasoline.

It is contended by the oil producers in asking Congress to write into the new tariff bill a duty of almost 100 per cent. on crude petroleum and 50 per cent. on gasoline that they need this protection to avert extermination at the hands of foreign oil interests.

On the other hand, the opponents of a high tariff on motor fuel point out that gasoline imports annually are approximately but 2 per cent. of the total production of the United States.

The American Motorists' Association, through its legislative representative, contends that the promise of the producers to keep faith with the consumer and not increase the price of gasoline if Congress imposes a high tariff would not be binding upon any single producer.

An analysis of all protective tariffs, it is contended, shows that the protection either tends to increase the price of the commodities protected or stifles natural competition and prevents a decrease in prices.

Export figures for 1920 show that the petroleum industry exported more than seven times as much gasoline as it imported. Imports during the year constituted but 2.4 per cent. of the total gasoline production. In 1928 imports were less than 2 per cent. of the production.

WISCONSIN PRODUCTION SCHEDULES BEING LIFTED; IMPROVEMENT GRADUAL

Milwaukee, Wis., Feb. 20.—Not in recent years, Wisconsin motor accessory manufacturers and car producers say, has there been so marked a tendency to watch actual sales and limit production to known demand.

For this reason increased output at plants in Milwaukee and throughout the state is going forward cautiously. At the Seaman Body plant employment is being gradually increased.

"There has not been any marked gain in employment, although we have been gradually adding men," Harold Seaman, president, stated. "We are feeling our way along, hopefully."

Reports from Nash Motors are that present indications are for a sharp increase in production early in March. Manufacturing operations are mainly on a five-day basis with a combined daily output averaging around 325 cars. Production schedules for this month, it was reported, have been closely regulated in accordance with demand.

Gradual increase of the employment force at the Fisher Body and Chevrolet plants in Janesville, Wis., is also reported.

U. S. PNEUMATIC TIRE PRODUCTION SHOWS DECLINE FOR 1929

New York, Feb. 20.—Production of pneumatic tire casings by United States manufacturers in December totaled 3,261,089, against 3,603,436 casings in November and 5,604,832 in December, 1928.

Shipments of pneumatic casings in December amounted to 3,346,020, against 3,557,759 in November and 4,590,947 in December, 1928.

Total production of pneumatic casings in 1929 was 73,307,562, against 77,943,817 in 1928, and total shipments in 1929 were 74,021,178 casings, against 74,295,916 casings in 1928.

Inventory of pneumatic casings at the end of December totaled 12,627,157, compared with 12,935,220 at the end of November and with 13,623,611 at the end of December, 1928.

Franklin Sales Gain 44% In 1929; Up in 47 States

Notable Increases in Western State Registrations

This is the second of a series of articles on the records made by individual automobile manufacturers in 1929 in sales in the United States, as indicated by the official registration figures from all the states, which are now complete for the full year.

NEW YORK, Feb. 20.—With sales in ten out of twelve months of 1929 exceeding the corresponding periods of the preceding year, the Franklin Automobile Company last year enjoyed record-breaking business, it is clearly indicated by the official registration returns for the year from all states, now available for the first time.

Domestic retail sales of this car, as shown by the actual registration figures, amounted to 10,704, as compared with 7,423 in 1928, an increase of 3,281 units, which is equivalent to 44 per cent.

The Franklin sales peak came last year in April and May, with registrations of 1,343 units in April and 1,383 in May, comparing with 823 and 715, respectively, in 1928, gains of 63 and 93 per cent.

The largest percentage increase in sales, however, came in the first month of the year, with January registrations of 560, comparing with 285 in January, 1928, an increase of 275, or 97 per cent.

The decreases from the 1928 level came in the final two months of the year, although the smallest increase over 1928 had been made as far back as August, when the registration amounted to 977, as against 793 a year before, an increase of 184, or 23 per cent.

Neither the decline of November or December was serious. In November the sales were 508, as against 517 the year before, off 1.5 per cent., and in December the drop was from 490 in 1928 to 427, a decline of 13 per cent.

Following are the complete United States registration returns for the Franklin car, month by month in 1929, as compared with 1928, with the percentage of gains indicated:

	1929	1928	% Gain
January	560	285	97
February	569	388	47
March	921	568	62
April	1,343	823	63
May	1,383	715	93
June	1,112	641	74
July	1,154	806	43
August	977	793	23
September	844	633	33
October	906	664	37
November	508	517	*1.5
December	427	490	*13
Totals	10,704	7,423	44

*Decrease.

One of the outstanding features of the Franklin sales in 1929 was the growth in popularity of the car in the Western section of the country.

Of the nine states in which the registrations of Franklin were more than doubled last year, eight were west of the Mississippi River. The largest increase was in New Mexico, where the sales gained 400 per cent. The neighboring state of Arizona was second in the percentage of increase with a gain of 260 per cent., while Nebraska, in the agricultural belt, was third, with an increase of 190 per cent.

Franklin registrations were up 184 per cent. in Nevada, 166 per cent. in South Dakota, 150 per cent. in Arkansas, 125 per cent. in Utah and 108 per cent. in Kansas.

The ninth state in which the sales were more than doubled was South Carolina, with a gain of 386 per cent.

Franklin sales in 1929 exceeded those of 1928 in every state in the country except North Dakota, where there was a decline of only one car.

In addition to the larger gains established in some of the Western

(Continued on Page 2)

DEALERS FETED AT INDIANAPOLIS

Distributors Play Host To Hundreds From Nearby Towns

By ARTHUR C. BUCK

INDIANAPOLIS, Ind., Feb. 20.—Several hundred out-of-town dealers have visited the nineteenth annual automobile show here this week and attended meetings conducted by Indianapolis distributors.

More than a hundred were guests of the Graham-Paige branch and heard the Graham policies outlined by F. R. Valpey, general sales manager from the Detroit factory.

W. J. Mattimore of the Theodore McManus Advertising Agency at Detroit also addressed the gathering, telling of McManus' plans in taking over the Graham-Paige Corporation's advertising.

Mr. Valpey told of a survey conducted by the Graham Brothers which involved the opinions of leading bankers and financial authorities from coast to coast and pointed definitely toward early industrial recovery and steady improvement. He declared the second and third quarters of this year would be splendid periods for the motor car industry as well as all other businesses.

L. G. Peed, general sales manager of the De Soto Motor Corporation, addressed a meeting of De Soto dealers at the distributor's headquarters here. About seventy-five dealers from surrounding counties were present to hear Mr. Peed's tribute to Jones & Maley, Indianapolis distributors, who delivered more than 800 of the De Soto sixes last year after taking over the contract in late February.

Mr. Peed said he believed business would be very good this year, although getting a slow start. He added that he felt that the purchaser would not overestimate his ability to pay for a car as had often been the case in the past.

Gov. Harry G. Leslie was guest of honor at a Marmon luncheon, G. M. Williams, Marmon president; Col. Howard Marmon and A. R. Heiskell, vice-presidents, and John Tainsh, assistant general sales director, were others at the speakers' table.

Mr. Tainsh outlined Marmon's plans and policies. He declared his company would build only as many cars as the public wanted and would strive to build them as the public desired.

About one hundred dealers were the guests of the Capitol Motors Company, Hupp distributor here, at a meeting and luncheon. Several factory officials were on the speakers' program and discussed the 1930 plans of their company.

Officials of the automobile show were highly optimistic over the reception accorded it and dealers. While actual show sales have not reached record levels, a great number of real buying prospects have been obtained and it is expected that the success of the show will be reflected in greatly increased sales in the near future.

Overland Changes Sales Policy; Promotes Three

TOLEDO, O., Feb. 20.—The advancement of three Willys-Overland regional managers to positions of assistant sales managers was announced here by George M. Graham, vice-president in charge of sales.

With the announcement of the promotions, Mr. Graham also revealed a change in the field sales contact policy which is expected to establish closer relationship between the home offices and the company's distributors.

G. V. Orr

C. H. Paxton

G. V. Orr, northwest regional manager, Chicago, and E. D. Knowles, southwest regional manager, Kansas City, have been made assistants to P. C. Gartley, general sales manager, western division, comprising the western half of the country.

Claude H. Paxton, eastern regional manager, New York city, becomes assistant to N. A. Beardsley, general sales manager, eastern division.

With these appointments the former regional system for sales direction and control has been discarded. While the three assistant sales managers will maintain their headquarters as heretofore, they will not be restricted to duties in their former regional territories but will assist their respective divisional managers throughout the territories under each one's jurisdiction.

The district sales managers will continue to report direct to the home offices in Toledo, as formerly.

Under this plan of sales control it is the belief of Willys-Overland executives that closer touch can be kept with the field forces and distributing organization.

CITIES SERVICE EARNINGS FOR YEAR INCREASE 33%

New York, Feb. 20.—Cities Service Company's net earnings for the twelve months ended January 31, 1930, were $45,413,728, an increase of more than 33 per cent. over the same period a year ago. The company's net earnings for January also set a new high mark for any month, amounting to $5,255,681 and show an increase of 59 per cent. over the same month a year ago, when net earnings were $3,294,338.

GOODRICH ANNOUNCES MILLER SUBSIDIARIES

Akron, O., Feb. 20.—J. D. Tew, president of the B. F. Goodrich Company, announces the formation of two subsidiaries to take over the activities of the Miller Rubber Company, which Goodrich is purchasing. The subsidiaries, organized under the laws of Delaware, are Miller Rubber Company, Inc., the manufacturing company, and Miller Rubber Products Company, a sales and distributing firm.

Executive officers of the new Miller corporation are J. D. Tew, president; T. G. Graham, vice-president; V. I. Montenyohl, treasurer, and S. M. Jett, secretary. R. T. Griffiths has been appointed vice-president and general manager of the Miller Rubber Company, Inc.

FEDDERS MANUFACTURING EARNS $230,628 IN 1929

New York, Feb. 20.—Fedders Manufacturing Company, Inc., reports for the year ended December 31, 1929, net profit of $230,628 after depreciation, interest and Federal taxes, equivalent to $2.30 a share on the combined 100,000 no-par shares of Class A and Class B stocks. This compares with $280,437, or $2.80 a share on the combined stocks in 1928.

FORD PLANS TO RAISE GOLDENROD FOR EDISON

Savannah, Ga., Feb. 20.—Henry Ford came to his Bryan county farm yesterday, supposedly to inspect operations for the raising of goldenrod from which Thomas A. Edison will produce rubber. The flower grows wild in this section.

MIDLAND STEEL PRODUCTS EARNS $8.50 PER SHARE

New York, Feb. 20.—The Midland Steel Products Company reports for the eleven months ended November 30, 1929, net profit of $2,654,058 after depreciation, Federal taxes, reserve for contingencies, and provision for employees' profit sharing, etc., equivalent under the participating provisions of the shares, to $22.99 a share on 96,930 shares of 8 per cent. preferred and $8.50 a share on 50,000 shares of no-par common stock.

TODAY

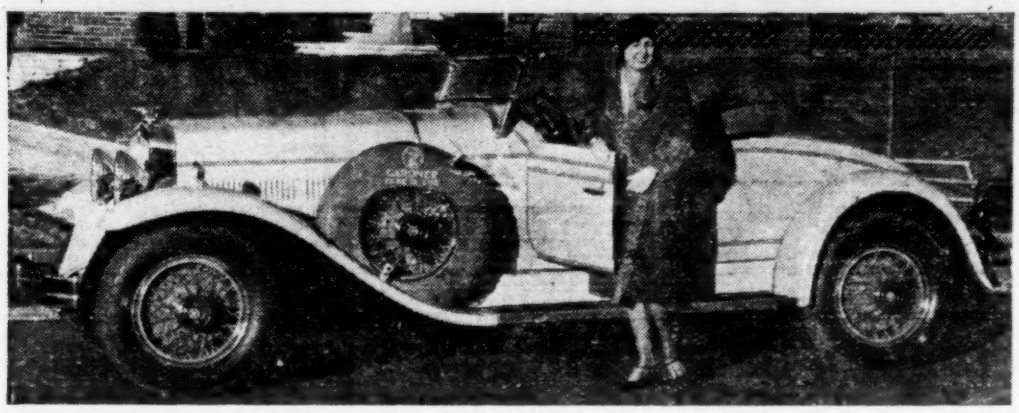
(On Inside Pages)

	Pages
Sparks From Detroit	2
Maryland and Delaware new car sales decline slightly in January	5
Editorial	4
Calendar of coming events	4
Here and there in the trade headlines, by MacConachie	4
Chicago jobbers' policy stricter	3
Pierce-Arrow maintains busy quality department	6
Stock prices, markets, financial news	11
MERCHANDISING	
Educating car buying public to judicious selection pays	7
REFERENCE TABLES	
New commercial car registrations	5
New passenger car registrations	6, 7
Truck specifications	8, 9, 10

DETROIT FORGING SALES IN JANUARY UP 146%

Detroit, Feb. 20.—The Detroit Forging Company reports for the year ended December 31, 1929, a net profit of $97,180 after charges and Federal taxes, equal to $1.95 a share on 49,814 shares of no-par stock. This compares with a net profit of $80,547, or $1.65 a share on 48,782 shares, in 1928. "January sales were approximately 146 per cent. greater than December, and the first fifteen days of February showed a marked increase over the corresponding period of January," said E. R. Wegener, president. At the annual meeting directors were re-elected. Officers were also re-elected.

Gardner Series 150 Sport Roadster



SPORT ROADSTER, one of the outstanding eight-cylinder models in the Gardner 1930 line, was featured in the salon held in connection with the recent St. Louis Automobile Show. The body and fenders of the car are finished in a striking champagne color, a decorative motif which is accentuated by crayon-blue body moldings and wire wheels. It is priced at $2,285

FRANKLIN 1929 SALES EXCEED 1928 BY 44%

(Continued from Page 1)

states named above, registrations of the Franklin made substantial increases in some of the more largely populated states. In New York sales were up 56 per cent., in Pennsylvania, 42 per cent.; New Jersey, 41; Michigan, 39; Massachusetts, 32; Illinois, 34, and California, 51.

Following are the complete 1929 registrations of the Franklin car by states, as compared with 1928, with the percentage of increase indicated:

	1929	1928	P. C. Gain
Alabama	38	26	46
Arizona	36	10	260
Arkansas	20	8	150
California	931	614	51
Colorado	47	31	52
Connecticut	387	321	21
Delaware	29	29	0
Florida	119	95	26
Georgia	152	102	49
Idaho	15	14	7
Illinois	562	305	84
Indiana	99	80	24
Iowa	39	24	63
Kansas	54	26	108
Kentucky	59	43	37
Louisiana	40	28	43
Maine	123	81	52
Maryland	142	88	62
Massachusetts	878	665	32
Michigan	120	86	39
Minnesota	56	40	40
Mississippi	3	2	50
Missouri	238	203	17
Montana	100	63	59
Nebraska	26	9	190
Nevada	17	6	184
New Hampshire	98	77	27
New Jersey	731	519	41
New Mexico	5	1	400
New York	2,122	1,359	56
North Carolina	61	47	30
North Dakota	9	10	*10
Ohio	674	536	26
Oklahoma	118	90	31
Oregon	115	108	6.5
Pennsylvania	1,216	893	42
Rhode Island	175	109	63
South Carolina	34	7	386
South Dakota	8	3	166
Tennessee	81	58	40
Texas	285	210	36
Utah	45	13	125
Vermont	25	19	30
Virginia	62	38	63
Washington	147	100	47
West Virginia	45	25	80
Wisconsin	217	139	56
Wyoming	11	8	37
District of Col.	90	55	64
Totals	10,704	7,423	44

*Decrease.

OHIO EMPLOYMENT GAINS

Columbus, O., Feb. 20 (UTPS).—The Bureau of Business Research of Ohio State University in a report covering employment in the vehicle manufacturing—including automobiles and parts—industry shows that January employment was 10 per cent. greater than in December and 33 per cent. less than in January, 1929. Of the fifty-eight reporting concerns, twenty-nine showed increases in January employment over December, twenty-seven showed decreases and two showed no change.

GETS LARGE ORDER

Oneida, N. Y., Feb. 20.—The Van Wheel Corporation has received a large order from the International Rarvester Company for 2,500 duals, which are standard equipment for the International Six-speed Special, one-ton truck. If this company can meet the specifications, about 200 wheels per day will be turned out, beginning April 1. New equipment has been added to the wheel plant, which is headed by Clark W. Davis, as president.

COL. FRANK E. SMITH NAMED TO E. G. BUDD DIRECTORATE

Philadelphia, Feb. 20.—Col. Frank E. Smith has been elected a director of the Edward G. Budd Manufacturing Company, it was announced today. His election as a director to the Budd Wheel Company was announced earlier in the week. Other directors whose terms have expired were re-elected. The stockholders also authorized a formal change in the by-laws as submitted to the stockholders in the announcement of the meeting to conform to requirements of the New York Stock Exchange in connection with the listing of preferred stock already issued.

WATERTOWN, N. Y., DEALERS STAGE ANNUAL DISPLAY

Watertown, N. Y., Feb. 20.—The twenty-third annual show of the Watertown Automobile Dealers' Association is under way at the State Armory, with fourteen local dealers exhibiting. Products of twenty-nine of the leading American car manufacturers are being shown. The armory basement is given over to the finest display of motorboats and accessories ever shown in northern New York.

JANUARY FIRE ENGINE SHIPMENTS HIGHER

Washington, Feb. 20.—Shipments of motored fire-extinguishing apparatus in January totaled 91 pieces, as compared with 130 in December and 90 in January, 1929, the Department of Commerce announced to day. Total shipments of motor pumping engines in 1929 were 997 pieces, while other types of motor apparatus totaled 33 pieces, the report states.

FORD'S BRITISH PLANT NEARING COMPLETION

London, Feb. 20 (UTPS).—Progress in the construction of the Ford Motor Works at Dagenham on the Thames near London continues steadily. Here, on some 300 acres of undeveloped land, are being erected works which will be capable of sending out to all parts of Europe and Asia Minor 250,000 motor vehicles yearly, 15,000 men being regularly employed.

McCORD RADIATOR EARNS $618,490 DURING 1929

Detroit, Feb. 20.—McCord Radiator and Manufacturing Company and subsidiaries report for the year ended December 31, 1929, net income of $618,490 after interest, depreciation and Federal taxes, against $746,497 in 1928. Stock outstanding consists of 28,925 no-par Class A shares and 172,410 no-par Class B shares.

NEBRASKA BUS FEES

Lincoln, Neb., Feb. 20.—State Treasurer Stebbins has received up to February 15 a total of $22,124 registration fees from buses operating in more than one county in Nebraska and equipped to carry more than seven passengers, for the year 1930. Under the law of 1929 such buses must pay $25 plus $7 additional for each passenger which the bus is equipped to carry. Fourteen lines have been licensed to date. All the larger companies have paid their 1930 fees, but a number of the smaller ones are still to be heard from. The total will probably be increased to about $24,000 when all are in.

WATERBURY HOLDS SHOW

Waterbury, Conn., Feb. 20.—The second annual automobile show, sponsored by the local lodge of Elks, is being held this week. Nine dealers are represented in the display, which is being staged in the State Armory. Edward J. Real is chairman of the executive committee.

AMPCO DRILL REPORTS BIG AUTOMOTIVE DEMAND

Jackson, Miss., Feb. 20.—Oscar Monrad, president of the Ampco Twist Drill Company, announced the company is operating on a schedule calling for capacity production for the ensuing three months, with particularly strong demand from the automotive industry and railroad shops throughout the country.

Ampco Twist Drill reports 1929 as its most successful year. The company supplies Ford, General Motors, Chrysler and Hudson in the automotive field. Benjamin H. Hale has just been appointed general sales manager.

FIRESTONE MAY ERECT NEW PLANT AT LOS ANGELES

Los Angeles, Feb. 20.—Following the announcement of a complete new line of Firestone batteries, it was learned last week that the Firestone Tire and Rubber Company of California may build a large battery factory in Los Angeles on a site adjoining its tire plant. R. J. Cope, vice-president and general manager of the Western Firestone organization, admitted that the subject was under serious consideration, and indicated that the factory is virtually assured. Since the introduction of the Firestone line of batteries, according to Cope, sales in this territory have exceeded all expectations.

EXTEND MOTOR TRANSPORT

Fort Worth, Tex., Feb. 20.—Extension of the Texas & Pacific motor transport, now operating between Fort Worth and Midland, in west Texas, has just been announced between Fort Worth and Texarkana, and over the Abilene & Southern, a subsidiary of the Texas & Pacific Railroad. The motor transport trucks operated by the railroad pick up and deliver package freight between points of origin and the railroad stations without additional charge.

MAYO VISITING WEST COAST

Los Angeles, Feb. 20.—W. B. Mayo, chief engineer of the Ford Motor Company, recently arrived in this city on a Maddux-T. A. T. plane. Mayo intends to stay in southern California about two weeks. He is on his annual tour of the Ford interests and plans to go over carefully the Ford assembly plant nearing completion at Long Beach. He predicted that the assembly plant will be ready to open its doors for production within the next five weeks.

SEES GOOD TRUCK YEAR

Los Angeles, Feb. 20.—Prior to leaving a few days ago on a tour of the various factory branches, Watt L. Moreland, vice-president and general manager, and Phil Mallory, sales manager for the Moreland Truck Company, Burbank, Cal., announced that motor truck prospects on the Pacific Coast are better now than for many years at such an early date. Moreland is confining his visits to the California branches and Mallory will continue into the Pacific Northwest.

HOUGHTON IS ADVANCED

Corning, N. Y., Feb. 20.—At the annual meeting of directors of the Corning Glass Works, Inc., Amory Houghton, who has been executive vice-president, was elected president, succeeding Dr. Eugene C. Sullivan, who becomes vice-chairman of the board. George B. Hollister, William H. Curtiss and Arthur L. Day were elected vice-presidents, and John L. Thomas, secretary and treasurer.

SPARKS from DETROIT

Workers' Age Limit

* * *

Lost Lake

* * *

Visitors at Oldsmobile

* * *

Shoulders to the Wheel

Fred Kingsbury—Detroit Editor

THERE has been a great deal of talk recently regarding practices of refusing employment to men because they have reached an arbitrary age limit and it was brought out that the majority of the factories in Detroit do not enforce such a limit.

At a meeting of the Society of Industrial Engineers a few days ago, Perry A. Fellows, Detroit city engineer and vice-president of the society, said that officials of more than 500 Detroit factories have condemned the policy of refusing jobs to workers because they are above an arbitrary age limit.

"A study of 500 manufacturing plants, made recently by the society, affords a fairly accurate cross section of conditions in this city," he said. "The survey showed convincing proof that industrial leaders are anxious to study the problem in the hope of discovering a solution. As a whole, they expressed the conviction that the arbitrary age limit is unfair.

"They agreed that the status of the employee should be determined not by his age but by his physical and mental capacity."

The survey was made directly to determine the status of employees ordinarily considered beyond the age of productivity, Mr. Fellows said. He pointed out a general concern over the introduction of women into business life when mechanization of industry was increasing rapidly.

* * *

A number of Detroiters are figuring on doing some exploring the coming summer. It seems that a "Lost Lake" has been found on the Upper Peninsula and a considerable number want to visit the body of water, despite the fact it is in a virgin wilderness and very difficult to reach.

* * *

THIS is a busy time at the new Administration Building of the Olds Motor Works in Lansing, Mich. Thousands of callers are being received at the new offices and the residents of Lansing also are joining in the opportunity to inspect the new structure.

Oldsmobile has been doing a great amount of construction work in the last two years.

* * *

The season for rumors seems to have arrived again and every one is wondering where these rumors start. Some of these rumors would have several of the large motor manufacturers bringing out new models. This, in a measure, is amusing to most of the automobile makers, as the majority of new models were announced at the recent motor shows.

* * *

WE all know that an immense number of automobiles are made every year in Flint, Mich., and that manufacturers of motor cars in that city stress the manner in which these automobiles will climb hills, without any apparent effort.

However, the I. M. A. News a few days ago published an article about George W. Hubbard, a veteran hardware merchant in that city, who said the first automobiles manufactured there had to be pushed over the hills by willing onlookers. He said the first motor car made in Flint, was merely an old carriage and that a man named Dr. Beagles rigged up an engine in it, connected up some gears and chains and had a horseless carriage. Mr. Hubbard says that more than once he put his shoulder to the rear and helped heave it along.

* * *

The boys over at the Dodge plant are enthusiastic over a "movie" recently taken of a test of strength of Mono-Piece bodies. It seems an automobile equipped with one of these bodies was started down a steep hill, rolled over and over many times, striking trees and stones and then, when it was righted, it was driven away under its own power.

DISTRIBUTION
SHOP EQUIPMENT
REPLACEMENTS

WHOLESALE

MERCHANDISING
ACCESSORIES
EQUIPMENT

CHICAGO JOBBERS' POLICY STRICTER

Reduce Volume Sales In January; Accept Better Risks

CHICAGO, Feb. 20.—Leading Chicago wholesalers experienced a decrease in sales during January, as compared with the same month last year, and, in one respect at least, some of them are rather glad of it. For, although their volume was all the way from 5 to 13 per cent. below January, 1929, the business they got was at least safe.

As Sidney F. Beech of the Motor Car Supply Company explains this point:—

"We could easily have beat last year's record in January if we had wanted to accept all the business offered us," said Mr. Beech. "However, we decided to exercise a bit more discrimination than usual in the matter of credits, and, as a consequence, we turned down a good deal, though not a large percentage, of business. Despite this stricter policy our sales held up practically to normal, and the slight recession we had was really less than had been anticipated."

In reporting a falling off in volume, J. C. Ralston, vice-president of the Beckley-Ralston Company, said it was partially due to the arrival of winter earlier than usual.

"Our November and December sales surpassed the same months of 1928," said Mr. Ralston. "In fact our trucks were over-taxed in delivering such winter items as anti-freeze solutions, radiator covers heaters and chains. December witnessed some of the winter's severest weather, and along with it the season's heaviest snow fall. What was the result? There was a heavy stocking up of these items, and, except in the case of anti-freeze solutions, the usual heavy January ordering has been less than last year. This fact, along with other conditions, convinced us in advance that January sales would show a decrease. If December had been a milder month, things would have been different, but as it was the weather played an important part in causing the January decrease."

Another prominent wholesaler who cites the weather as a major influence in causing a loss in January is W. M. Weber of the Chicago Automobile Supply House.

"Both December and January were rather unseasonable," said Mr. Weber. "December was colder than normally and produced a demand out of proportion for winter items. This in turn affected January sales by forcing an earlier than usual stocking up during December. Our business showed a loss as against January, 1929, but conditions appear favorable for a spirited comeback. There is a better feeling everywhere in business circles and prospects are much brighter than they seemed a month or two ago. The early winter and the mild February weather so far make it look like an early spring, and this observation is further supported by noting the record number of cars on the streets at this season of the year."

Another wholesaler, specializing mostly in the maintenance field, S. O. Treland of Grimm-Hansen-Treland, Inc., stated that "we had expected a falling off in business after the record volume of November and December. As a matter of fact, January is always a slower month."

Although no sharp increase is anticipated during February, practically all of the wholesalers expect to feel the real effects of a steady upward curve in their business, beginning in March and carrying on throughout most of the year.

EQUIPMENT SHOW, CLINIC STAGED IN MINNEAPOLIS

Minneapolis, Feb. 20.—An equipment show and clinic was recently staged by the Minneapolis Iron Store Company during the week of the Northwest Automobile Show. The exhibition was held in the large basement of the firm's headquarters. The show and clinic featured modern shop equipment in actual operation, so that dealers could get first-hand information on the value and use of the equipment. Factory men were on hand to demonstrate.

Jobber's Counter Makes Stock Accessible

THE Bicknell Manufacturing and Supply Company, Janesville, Wis., has a counter length of approximately fifty feet, extending across the front of all sections and also on one side. The full length of the sections shown in the photograph is thirty feet each, with a cross aisle in the middle of each section, thus making the stock accessible from front counter, side counter and rear end of store. A very complete line of gaskets are carried on wings at the rear end of the store

Editor's Column

BURTON & ROGERS MANUFACTURING COMPANY has resumed a rather unique type of educational campaign among its wholesale distributors in the West and South.

In conjunction with the company's district men, E. J. Planas, a special representative, is on a three months' trip, in which he contacts principally with jobbers' salesmen and dealers. He carries with him charts showing the market for his company's products, the merchandising possibilities in the battery and electric field and various general equipment statistics. His lectures are educational and inspirational.

His method is to have jobbers arrange dealer clinics in advance, and he conducts his school at as many of these little clinics as the jobber will undertake. In Chicago, when he followed this plan in 1928, one wholesaler held such meetings once a week for four weeks. The average attendance was forty-one dealers. At Brooklyn during January of this year one school meeting was held in the evening and eighty dealers attended. The session lasted for three hours and then the dealers stayed on until 12.30 a. m. to watch various demonstrations.

Mr. Planas has had considerable experience as a teacher in electrical schools. He has an unusual grasp of the general equipment problems, and during the course of his lecture he does much to further the interest of dealers in equipment in general.

IN a full-page newspaper advertisement the Chesapeake Auto Supply Company of Norfolk, Va., reviewed its ten years of business growth for the benefit of the motor-minded public.

The advertisement, which appeared in an automobile show number of the Norfolk Ledger-Dispatch, carried pictures of the company's headquarters as well as pictures of its branch houses in Elizabeth City and Newport News. Photographs of its personnel and a summary of the lines it carries were included in the display.

ONE of the best definitions of a salesman was contained recently in the "Spirit of a Champion," a salesman's organ issued by the Champion Spark Plug Company. It follows:

A salesman is only a salesman when he is engaged in the actual process of selling. When a salesman arranges his prospect cards in alphabetical order, and places them neatly in a little box, he isn't a salesman. For just that length of time he is a $12 a week filing clerk.

When a salesman spends half a day typing a letter by the one-finger process, he isn't a salesman. For that length of time he isn't even a poor $15 a week typist.

When a salesman is walking down the street, he isn't a salesman. He is just a pedestrian like every other man on the street.

When he is driving his car he isn't a salesman, he is merely another traffic congestor.

Even when a salesman is sitting in the prospect's office, talking about the World's Series, he isn't a salesman. He is just a visitor.

He isn't a salesman until he has placed before his prospect a definite proposition to which the prospect can say "Yes" or "No" and asked him to buy it.

That is actual selling, hard work while interviewing the prospect.

Wholesale Brevities

Jamaica, N. Y., Feb. 20.—Lou Shane, general purchasing agent of the S. & S. Auto Equipment Company, is spending his winter vacation in Havana, Cuba.

Philadelphia, Feb. 20.—J. Lazaroff was recently tendered a surprise party by members of his organization, the Lancaster Auto Supply Company of this city on the occasion of his birthday.

Bloomington, Ill., Feb. 20.—I. J. Bower, manager of the Bloomington store of E. B. Collins Company, now also has charge of the Champaign, Ill., store.

Sunbury, Pa., Feb. 20.—A. J. Bobb has accepted a sales position with the Sunbury Auto Parts Company of this city.

Erie, Pa., Feb. 20.—After an absence of seven years, Charles H. Shanks is again a counter man at the Pennsylvania Rubber and Supply Company, here.

Los Angeles, Feb. 20.—A new warehouse has been opened by the John C. Hoof Company at 236 15th St. to service southern California distributors. Complete stocks of all Hoof lines will be maintained. This is the [illegible]th Hoof warehouse to be open[illegible] others being located at New York, Dallas, Atlanta and San Francisco.

Grand Rapids, Mich., Feb. 20.—The new home of the Automotive Parts Corporation will be complete about April 1. This new building will be one of the most modern parts houses in the state. Complete McQuay-Norris lines will be carried. Jack Imonen is the manager of this concern.

Sunbury, Pa., Feb. 20.—The rearrangement of the store of the Sunbury Auto Parts Company has considerably increased the storage space and allows a better display of merchandise.

Wyoming, Pa., Feb. 20.—Harry Eshlemen of this city has joined the K. & K. Auto Parts organization and is now stationed at the Wilkes-Barre branch.

Grand Island, Neb., Feb. 20.—Russ Miller is now manger for Storz Community Store. Russ has been with Storz for some time and formerly traveled a territory.

Watertown, N. Y., Feb. 20.—Lawrence & Hill, Inc., distributor of McQuay-Norris products, has recently completed an addition to its building.

Flint, Feb. 20.—C. W. McKinley has been appointed assistant chief engineer of the experimental engineering department of the AC Spark Plug Company, it was announced today. Mr. McKinley, who formerly was chief engineer of the Willys-Overland Company and has been with AC for the past five years, will retain his duties as engineer in charge of the AC oil filter division.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

WESTERN MOTOR SUPPLY SOLD TO WILLIAMS CO.

Minneapolis, Feb. 20.—Williams Hardware Company has taken over the business of the Western Motor Supply Company of this city and also its branch at Winona, Minn.

The Minneapolis store will be equipped for servicing Twin City car dealers and distributors. This store will be managed by Tom Rennix, formerly city salesman for Western Motor Supply Company, and the Winona store will remain under the management of F. J. Mertes.

The Minneapolis store is being remodeled to include an elaborate display room for the exhibition of shop equipment and accessories. A complete line of replacement parts also will be carried. All buying will be handled directly from the Williams Hardware Company office.

HI LAB PRODUCTS NAMES WILLS SALES MANAGER

INDIANAPOLIS, Ind., Feb. 20.—Incidental with the sixtieth anniversary of Hide Leather and Belting Company, A. G. Snider, president, announces the appointment of C. M. Wills as sales manager of HiLaB Products Company, automotive division of this company. Mr. Wills has assumed his new duties.

Mr. Wills has had extensive selling experience as well as having been district sales manager, with offices in Chicago, St. Louis, Dallas and other parts of this country and Canada for the Prest-O-Lite Company. Later he was manager of all United States branches and warehouses for this company, with the exception of the Pacific Coast. Just previous to his present new connection he was engaged in special sales and development work for the Goodyear Tire and Rubber Company, Inc., with headquarters in Milwaukee.

C. M. Wills

Greater co-operation is to be given this year to the several thousand jobbers and dealers selling HiLaB products in practically all countries throughout the world. And more intensive effort is to be made in establishing new markets and sales outlets through the trade here and abroad. Many new connections have already been added.

MAYDOLE HAMMER CO. ADOPTS NEW LABEL

Blue and gold, small in size and attractively designed, the new label now being used by the David Maydole Hammer Company, Norwich, N. Y., is most distinctive.

The heads of Maydole hammers appears in gold letters on a deep-blue background surrounded by a gold border, as shown in the accompanying illustration. The company name appears in blue on a gold panel beneath and "World's Standard Since 1843" appears in blue on a gold panel above the blue background, making a compact design in strong, rich colors that has eye-arresting qualities and adds to the appearance of the hammers.

The heads of Maydole Hammers are now sprayed with a coat of lacquer providing a moisture-proof finish that lasts indefinitely. The smooth, black unpolished parts of the hammer head contrast with the highly polished face, sides and claws and emphasize the good design and strong, sturdy construction.

SMITH OF HOLLINGSHEAD, CONTACTING JOBBERS

Camden, N. J., Feb. 20. — G. F. Smith, general sales manager of the R. M. Hollingshead Company, during the first three weeks of February made a trip through the central West and central Southern states, to contact Whiz wholesalers and to meet with the several division managers of the Whiz organization, studying with them such local problems as may exist in their territories.

MID-ATLANTIC JOBBERS SET CONVENTION DATES

Philadelphia, Feb. 20.—Middle Atlantic Automotive Jobbers will hold their spring convention in Philadelphia on Monday and Tuesday, April 28 and 29, according to an announcement issued by R. W. Shreiner, secretary and treasurer.

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

AUTOMOTIVE DAILY NEWS PUBLISHING CORPORATION,
350 Hudson St., New York, N. Y.
O. J. Elder, President. H. A. Tarantous, Vice-President. Alexander Johnston, Secretary.

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Member A. B. C.

FRIDAY, FEBRUARY 21, 1930

ADVERTISING AND BUSINESS HEADQUARTERS
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George M. Slocum, Manager Detroit Bureau, 427-8 Fisher Building, Detroit, Mich., phone Empire 3500; Willard R. Cotton, Western Manager, 333 North Michigan Ave., Chicago, Ill., phone Central 5936; Metz B. Hayes, New England Manager, Little Building, Boston, Mass.; Blanchard, Nichols & Coleman, American National Bank Building, San Francisco, Cal.; Lincoln Building, Los Angeles, Cal.; 1037 Henry Building, Seattle, Wash.; Philadelphia Office, 15th and Cherry Streets. Address ALL advertising and business correspondence to 2716 Graybar Building, New York City.

EDITORIAL DEPARTMENT
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1926 Broadway, New York, N. Y. Telephone TRA falgar 4500
Subscription Rates—One year, $12.00, two years, $20.00, for United States and Canada. To Foreign Countries—One year, $15.00; two years, $26.00. Single copies, 10 cents.

$15,000,000 for Highway Safety

PUBLIC benefit and sound economics are closely related. The automobile industry's Highway Safety Plan which will scrap 400,000 unfit cars in a year is an example of large-scale benefaction which is solidly grounded on business fundamentals.

Every one knows that the used car falls into two classifications. The first class comprises the serviceable automobiles which are salable by the dealer and of value to the buyer. The second class are the rattle-trap *used-up* cars which are a menace to all users of the highway and are an economic nuisance. They spell loss to the dealer and loss to those who operate them.

The various companies participating in this program estimate that they will spend a total of $15,000,000 for sending such cars to the scrap heap.

Those who are concerned with the national problem of accident prevention—and the motor executives are in the forefront of that movement—will greet enthusiastically this activity to clear the roads of unfit vehicles.

Alvan Macauley, president of the National Automobile Chamber of Commerce, which fosters the project, characterizes the effort as *"perhaps the greatest single safety move industrial history."*

The fact that the Highway Safety Plan is good business sense strengthens its humanitarian value. Economic soundness is usually essential if any move is to be continuous rather than sporadic. The use of the automobile constitutes a vast democratic transportation system in which the maker, the dealer and the owner have a common interest. The removal of unfit cars will serve to clean up a situation prejudicial to the industry and the trade. It will be a boom to the nation of car-owners by removing from the highways a huge amount of undesirable rolling-stock.

American industry has again proved its ability to deal with major problems by methods which are comprehensive and far-visioned.

Partners

CYNICS are always telling us that human nature never changes. What they really are intimating is that the human animal today is just as selfish and fundamentally just as brutal as were his caveman ancestors of the dawn ages.

It is true that the fundamentals of human psychology do remain with us over the ages, but human relationships do change and in spite of the cynics we do drag slowly upward. It would be a willfully blind observer who did not recognize the vast improvement that has taken place even in such a brief period as twenty-five years in the relationship that exists between employer and worker. The cynic will say that this is so because the employer realizes that he can get more and better work from labor by treating it decently. But no matter if the motivation does rest in selfishness, nevertheless the workman has gained immeasurably by the change.

What set us thinking along these lines was a recent announcement that nearly 900 employees of the Oldsmobile and Viking factories today are buying their own homes from their wages with the help of the General Motors' housing plan. Throughout the operations of this one big corporation, thousands of factory employees are becoming home owners, paying for their domiciles from wages. It is almost impossible to exaggerate the different attitude of mind that comes to a worker who has become a home owner.

The doctrines of bolshevism can make little headway in a country with a large home-owning worker population. Perhaps the cynic may be right in saying that the employer realizes this full well and acts as he does simply as a protective measure, but isn't labor the ultimate gainer?

Here and There in the Trade Headlines— By MacConachie

THE INDUSTRY
SENDING FLOWERS WAS JUST A TRIFLE PREVIOUS.
HE NEEDS YOU SAW-BONES LIKE HENRY FORD NEEDS A BENEFIT
GMAC '30
LISTEN BROTHER— I'LL LET YOU HAVE ONE OF THESE CHARIOTS FOR LESS THAN THE MAKER WOULD SELL ONE TO HIS OWN BROTHER NEVER BEEN CUT-RIGHT OFF THE BOAT
THE "CARLEGGER" IS ABROAD IN SOME PARTS OF THE LAND HIS LANGUAGE IS FAMILIAR.
THERE'S ONE CHECK I'M GLAD TO PAY
PUBLIC
$891 PER-PERSON
EVERY REAL CITIZEN IS GLAD TO PAY THE HIGHWAY DEBT.

RECORD CHRYSLER RUN

Asbury Park, N. J., Feb. 20.—After making a record run in a Chrysler "77" roadster from Asbury Park to Palm Beach, Fla., in 25 hours and 39 minutes, Peter F. Wertz, president of Monmouth Motors, Inc., Chrysler dealer here, and Donald L. Marsh, president of D. L. Marsh, Inc., Chrysler dealer in Belmar, beat their own record on a return run, which was made in 23 hours and 2 minutes. The return run was sanctioned by the A. A. A., it was announced by Alfred de Cozen, president and general manager of the De Cozen Motor Company, Chrysler distributor.

COMING EVENTS

FEBRUARY

15-22—Indianapolis. Automobile Show.
15-22—Trenton N. J. Automobile Show.
15-22—Providence, R. I. Automobile show.
15-22—Canton, O. Automobile Show.
15-22—Red Bank, N. J. Monmouth County Automobile Show.
17-22—Omaha, Neb. Automobile Show.
17-22—Duluth, Minn. Automobile Show.
17-22—Waterbury, Conn. Automobile Show
19-22—Watertown, N. Y. Automobile Show.
19-22—Bloomington, Ill. Automobile Show.
19-22—Bloomington, N. J. Automobile Show.
20-22—Holyoke, Mass. Automobile Show.
20-22—New Ulm Minn. Automobile Show.
21-23—Michigan City, Ind. Automobile Show.
21-Mar. 1—Altoona, Pa. Automobile Show.
22-Mar. 2—Los Angeles, Cal. Automobile Show.
24-March 1—Camden, N. J. Automobile Show.
24-March 1—Des Moines, Ia. Automobile Show.
24-March 1—Fall River, Mass. Automobile Show.
25-March 1—Oil City, Pa. Automobile Show.
25-Mar. 1—Evansville, Ind. Automobile Show at Memorial Coliseum.
25-March 2—Seattle, Wash. Automobile show.
27-29—New Castle, Pa. Automobile Show.
27-Mar. 1—Albuquerque, N. M. Automobile Show.
27-Mar. 1—Calgary, Alberta. Automobile Show

MARCH

3- 7—Boston, Mass. Automobile Salon of fine cars.
3- 8—Enid, Okla. Automobile Show.
5- 8—Sioux City, Ia. Automobile Show.
8-16—Spokane, Wash. Dealers' Progressive Automobile Show.
11-15—Houston, Tex. South Texas Automobile Show.
12-14—Enid, Okla. Farm Machinery and Tractor Show.
13-15—Moline, Ill. Automobile Show.
15-20—New Orleans, La. Automobile Show.
16-30—Nice, France. Automobile exhibition.
20-22—Muncie, Ind. Automobile Show.
24-29—Lincoln Neb. Automobile Show.
27-29—Elkins, W. Va. Automobile Show.

APRIL

12-27—Milan, Italy. Italian International Automobile Show.
24-25—Cleveland, O. National Petroleum Association meeting.
28-May 3—Henderson, N. C. Automobile Show.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

Safe!

A cable connection based on sound engineering principles

Tru-Loc Cable Fittings have replaced "socket" fittings, clamps and other old style methods of cable anchorage.

Tru-Loc Fittings are cold-flowed (machine processed) on the cable. The metal of the fitting fills the triangular spaces between the strands, and also the spaces between the individual wires of each strand.

No heat is applied. Tru-Loc Fittings become virtually one piece with the cable—uniform in strength, simple, compact and dependable.

AMERICAN CABLE COMPANY, *Incorporated*
An Associate Company of the American Chain Co., Inc.
3-111 General Motors Building, Detroit, Michigan.
Executive Offices:
New York Central Building, 230 Park Ave., New York, N. Y.

ACCO
AN ASSOCIATE COMPANY OF AMERICAN CHAIN COMPANY, INC.
IN BUSINESS for Your Safety

TRU CABLE LAY
TRU FITTINGS LOC
TRU BRAKE CONTROL STOP

Maryland, Delaware January Car Sales Decline Slightly

10% DROP SEEN FOR THE COUNTRY

First Returns Indicate Favorable Registrations

NEW YORK, Feb. 20.—Indications given by the first returns of January new passenger car registrations are that the decline in retail sales of new cars in the first month of the year amounted to about 10 per cent., which, in view of the fact that a year ago Ford sales were at an abnormally high level, due to the demand for the new Model A, is considered a very favorable record.

The first state to report was Illinois, where the decline from the first month of 1929 was 10 per cent.

Two more states reported final registrations for the month today. They were Maryland, with a decline of 10 per cent. also, and Delaware, with a falling off of only 8.5 per cent. from January, 1929.

The total registrations in Maryland for the month amounted to 2,298, as compared with 2,565 in the corresponding period of 1929, a decline of 267 units, equivalent to 10 per cent.

January registrations in Delaware totaled 441, as against 482 a year ago, a decline of 41, or 8.5 per cent.

It is a notable fact that ten makes of cars, excluding those not in production a year ago, set up gains in January sales in Maryland over the first month of 1929, with Chevrolet leading in the gain in units.

Ford's registrations increased 15 from 903 to 918, while Chevrolet gained 147 from 506 to 653. Other makes to show increases were Pontiac, 37; Oldsmobile 1; Graham, 20; De Soto, 2; Oakland, 2; Pierce-Arrow, 11; Reo, 8, and Jordan, 2.

Six makes of cars set up increases in Delaware in January over the corresponding month of last year. They were Ford, with a gain of nineteen units; Chevrolet, eight; Buick, ten; Pontiac, thirteen; Plymouth, two and Hudson four.

The January returns from the three states, while representing only two distinct sections of the country, are highly encouraging to the industry, which is watching business now more closely than for several years at this season. It had been feared that January sales would show declines running as high as 25 to 50 per cent. in some cases, and the fact that the first indications are that 10 per cent. will be about the extent of the decline is cause for improved feeling in the industry generally.

It would now appear that if the states reporting thus far have made better showings in the first month of the year than the country generally, there could be only a small per cent. difference. It would now be safe to predict that the January decline from a year ago would be somewhere between 10 and 15 per cent., with the likelihood that 10 per cent. will be the closer figure.

Following are the January registrations in Maryland, as compared with the corresponding month of 1929:

	1930	1929	Gains
Ford	918	903	15
Chevrolet	653	506	147
Pontiac	88	51	37
Essex	75	206	..
Buick	54	109	..
Chrysler	42	62	..
Oldsmobile	42	41	1
Nash	34	80	..
Graham	33	13	20
Hudson	32	45	..
Dodge	31	72	..
Plymouth	28	43	..
Studebaker	28	44	..
Whippet	24	129	..
De Soto	23	21	2
Willys	23	*..	..
Durant	22	33	..
Oakland	21	18	3
Hupmobile	20	29	..
Packard	15	26	..
Pierce-Arrow	14	3	11
Reo	14	6	8
Marquette	11	†..	..
Willys-Knight	9	20	..
Marmon	8	9	..
Erskine	6	7	..
Peerless	6	6	..
Cadillac	4	5	..
Auburn	3	9	..
Franklin	3	7	..
La Salle	3	13	..
Lincoln	3	9	..
Jordan	2	..	2
Stutz	2	3	..
Blackhawk	1	†..	..
Cord	1	†..	..
Viking	1	†..	..
Miscellaneous	1	37	..
Totals	2,298	2,565	‡267

*Then included with the Whippet. †Not in production. ‡Net loss.

Following are the Delaware registrations of new passenger cars for January, 1930, as compared with the corresponding month of 1929:—

	1930	1929	Gains
Ford	195	176	19
Chevrolet	95	87	8
Buick	30	20	10
Pontiac	24	11	13
Nash	13	21	..
Durant	11	12	..
Essex	11	31	..
Packard	8	9	..
Plymouth	8	6	2
Oakland	7	13	..
Hudson	6	2	4
Hupmobile	4	5	..
La Salle	4	10	..
Oldsmobile	4	13	..
Willys	4	*	..
Chrysler	3	8	..
Whippet	3	21	..
Dodge	2	8	..
Franklin	2	3	..
Graham	2	4	..
Cadillac	1	9	..
Marquette	1	†	..
Reo	1	1	..
Studebaker	1	4	..
Miscellaneous	1	8	..
Totals	441	482	‡41

*Then included in Whippet. †Not in production. ‡Net loss.

BROCKWAY TRUCK DEPOT LEASED IN NEW JERSEY

Jersey City, N. J., Feb. 20.—Charles Loske of Union City has leased the loft building at 648 Montgomery St., Jersey City, which, after alterations, will be used as a storage depot for Brockway motor trucks, for which he is the county dealer.

The building is a two-story brick structure, covering a plot 25 by 100 feet, and is equipped with an electric truck elevator. It was erected by the late Thomas Lynch, one of the largest trucking contractors of Hudson county, and occupied by him as his business headquarters up to the time of his death.

T. L. TELLENTINE HEADS COASTAL TRANSPORT CO.

Brunswick, Ga., Feb. 20 (UTPS).—The Coastal Transport Company has been placed under the control of the Colonial Stages system, which has just taken the concern over.

The following officials have been elected by the new board of directors: President, Thomas L. Tellentine of Cincinnati, O.; vice-president, Alfred W. Jones of Brunswick, Ga.; vice-president and treasurer, H. Pierce Brawner of Raleigh, N. C., and vice-president and general manager, Nieuport Estes of Jacksonville, Fla.

Dealer Activities

Buffalo, Feb. 20.—Clayton Luss and Richard Fox, former automobile dealers of Springfield, N. Y., have been granted a dealer franchise for Plymouth cars in Olean, N. Y., and vicinity and have opened sales and service quarters at 106 North 6th St. in that city under the firm name The Mayflower Motors.

Port Angeles, Wash., Feb. 20—Appointment of the Engblom & Warner Garage of 609 East 1st St., here, as Hudson-Essex dealer for Clellam county has been announced by the Allen Motor Company of Seattle, western Washington, Hudson Essex distributor

Boston, Mass., Feb. 20.—G. E. Mahoney, city sales manager of the Olds Motor Works, announced the appointment of the Walker Indian Company of this city as dealer in Oldsmobile and Viking cars. This company also handles Graham-Paige cars and has dealt in Indian motorcycles for the past thirty years. Special equipment has been installed for servicing the new line.

Buffalo, Feb. 20.—Milton J. Frank has been appointed Dodge dealer for the Williamsville suburban territory here, and has opened sales and service headquarters at 5686 Main St., beyond the city line.

McKeesport, Pa., Feb. 20. — The McKeesport Motor Company, here, has been appointed associate Oakland-Pontiac dealer of C. A. Rehtmeyer, Inc., Pittsburgh district distributor.

Geneva, N. Y., Feb. 20. — The Lakeland Motor Company, Auburn, N. Y., has applied for a franchise to establish and operate an express, local and package line between Geneva and Ovid, N. Y., a one-way distance of sixteen miles.

Passaic, N. J., Feb. 20. — The Passaic Motor Company, Inc., has McKeesport Motor Company here and Cord Front Drive automobiles. Salesrooms are located at 857 Main Ave., between Chestnut and Sherman Streets.

Buffalo, Feb. 20. — Frank L. Bumpus, Graham-Paige dealer in south Buffalo, with headquarters at 1431-37 Seneca St., has awarded contracts for an addition which will more than double the floor space of his sales and service building at that address.

Decatur, Ill., Feb. 20.—The Merry Motor Sales Company has been appointed local dealer for the Marmon cars and opened its salesroom last week with eight models on display. C. H. Tabor, formerly with the Spiess Auto Sales, was here arranging for the opening.

Jamestown, N. Y., Feb. 20.—The firm of Johnson & Reynolds, Inc., local Franklin dealer, with headquarters at 121 East 3d St., has taken the distributorship for Durant motor cars in Chautauqua county. The Durant line will be handled in conjunction with Franklin.

Port Angeles, Wash., Feb. 20.—Bids have been called for immediate construction of a large garage and automobile salesroom at 1st and Cherry Streets for the William Buhler Motor Company, Port Angeles Buick dealer. The building will be 50 by 140 feet in size. It will be of concrete and tile construction and of Spanish architecture. The building is to be ready for occupancy by the fore part of April.

Joplin, Mo., Feb. 20.—The Gorman Motor Company, Chrysler and Plymouth distributor, has moved from 6th and Joplin Streets to 409 Wall St., former home of the Packard. The first floor is given over to new car exhibits and the second floor to used car storage.

Joplin, Mo., Feb. 20.—The Auburn-Douglas Distributors, Auburn agency, has moved to 616 Wall St., where there is more floor space.

Personal Briefs

Memphis, Tenn., Feb. 20.—Walter D. Childs has been appointed floor manager of the used car division of the Olds Motor Works, 1071 Union Ave., W. A. O'Hearne, manager, announces.

Utica, N. Y., Feb. 20. — Stephen Shufelt, salesman for the Jones Motor Car Company of this city, Ford and Lincoln distributor, has sold 133 new cars and 221 used cars during 1929. Such a record has rarely been equaled in this territory.

Pittsburgh, Pa., Feb. 20.—Thomas W. Winans, formerly associated with the Ford Motor Company here, is the new metropolitan district representative for the Oldsmobile Pittsburgh Company, according to C. L. Day, vice-president and general manager of the company.

Louisville, Ky., Feb. 20—Announcement has been made by Browder & Hoskins, Chevrolet dealer here that Jess D. Heybach, a company salesman has become a member of the 100-car club, which has but two members in this city. The other is J. C. Wehrley.

Memphis, Tenn., Feb. 20.—Fred Bottom has been appointed manager of the Automobile Sales Company at 1095 Union Ave., Iver Schmidt, president, announces. The Union Avenue branch distributes Studebaker and Pierce-Arrow automobiles.

Philadelphia, Pa., Feb. 20.—S. R. Blockson, one of Philadelphia's old time car distributors, has retired. He had been affiliated with the Philadelphia Automobile Trade Association since September, 1912, as an active member. For a long time he was distributor in this territory of Stutz cars, and for the past year he has been distributing the Stearns-Knight. Some years ago he built the Sylvania Hotel at Juniper and Locust Streets and he will now devote all his time to the hotel business and his numerous real estate projects.

Lincoln, Neb., Feb. 20.—F. R. Hussong, president of Hussong & Rogers, Inc., Ford and Lincoln distributor in this city, has been elected vice-president of the Eastridge Country Club here.

Los Angeles, Feb. 20.—H. J. Cain has been appointed Peerless Motor Car Company district manager in charge of southern California territory, with offices in this city. Cain was formerly manager of the Texas territory.

Superior, Wis., Feb. 20.—The Sampson-O'Connell Company, automobile dealer in Superior, has been incorporated for $50,000 by E. Sampson and L. E. O'Connell.

FOUR LINES OF MARMON MEET WIDE ACCEPTANCE

Indianapolis, Feb. 20.—The 1930 Marmon line, covering all important price classifications for the first time with straight-eights, is meeting widespread and definite acceptance throughout the country, according to Thomas E. Jarrard, Marmon general sales director, who has just completed visits to nineteen automobile shows, ending the first phase of a four-month business tour of the country.

Mr. Jarrard bases his optimistic statement on actual sales results at the principal shows in addition to interest in the new Marmon products on the part of the record crowds which attended all exhibits. Since the New York show, the Marmon sales director has visited motor displays from Montreal to Denver, including such important exhibits as Kansas City, Cleveland, Boston, Pittsburgh, Chicago, Philadelphia, Minneapolis and many others.

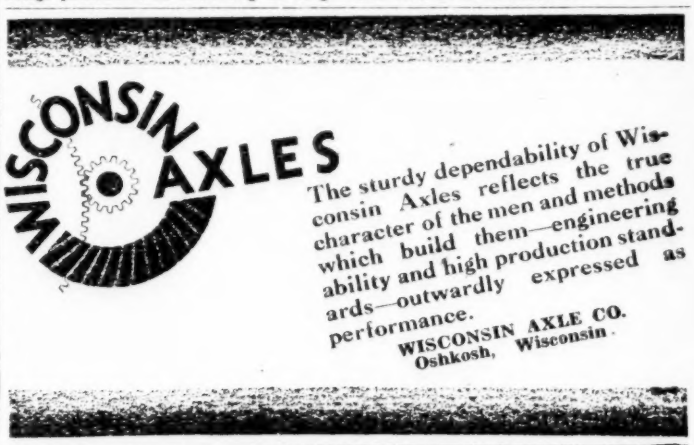
TRACTOR, FARM EQUIPMENT SHOW IN WICHITA, KAN.

Wichita, Kan., Feb. 20.—Machinery by the car and trainload is being directed to Wichita for the twenty-ninth annual Western Tractor and Power Farm Equipment Show and the fifth annual Southwest Road Show and School. Both exhibitions will be held from February 25 to 28. Fred Wieland is secretary of the Wichita Thresher and Tractor Club, Inc., which sponsors the two attractions.

TRENTON SHOW OPENS TO LARGE ATTENDANCE

Trenton, N. J., Feb. 20.—Indications are that there will be a record attendance this week at the show of the Trenton Automobile Trade Association at the Armory. Snow failed to keep down the opening attendance.

John L. Brock, president of the association and director-general of the exhibition, has been assisted by a committee comprising William A. Weinmann, Arthur Perkins, Philip W. McKeag and Dr. L. T. Rogers.


WISCONSIN AXLES
The sturdy dependability of Wisconsin Axles reflects the true character of the men and methods which build them—engineering ability and high production standards—outwardly expressed as performance.
WISCONSIN AXLE CO.
Oshkosh, Wisconsin

Cumulative New Commercial Car Registration Table, January, 1930

Returns for today: Delaware and North Dakota

Some of this data has been published previously, but it is given here complete for the convenience of our subscribers.

States	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Dover	Fargo	Federal	Ford	G. M. C.	International	Mack	Pierce-Arrow	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys	Willys-Knight	Miscellaneous	Totals	States
Delaware	2	1	21		2				25	5	3	2			1						1	2			1	66	Delaware
Illinois	11	6	649	112	108	4	26	18	917	75	201	17		1	51	1		18	4		43	28			137	2427	Illinois
N. Dakota			45		1		5		70	1	34				1		2				2		3	2		166	Nor. Dak.
Totals	13	7	715	112	111	4	31	18	1012	81	238	19		1	53	1	2	18	4		46	30	3	2	138	2659	Totals
Del., 1929	1		14		5				35	4	4	1			1		1					2				68	Del., 1929
Illinois, 1929	8	24	394	146	200		20	8	974	122	313	41	1	5	72	4		7	4		11	32			215	2601	Ill., 1929
N. Dak., '29			63		8			1	79	9	51			3			2							1		217	N. D., '29

Production - - Engineering - - Factory

Pierce-Arrow Maintains Busy Quality Department

AT a recent meeting of the Buffalo section, C. R. Nicodemus, assistant to the vice-president in charge of production of the Pierce-Arrow Motor Car Company, told the members something about the quality department of his company. Following is the substance of his remarks, as summed up in the S. A. E. Journal:—

The quality department was created by B. H. Warner, vice-president in charge of engineering and manufacturing, and he personally conducts its activities directly from his office. The object of the department is to assure that the highest possible degree of quality is built into the Pierce-Arrow cars at all times. To accomplish this, it was decided that Mr. Warner's contact with the various production divisions should be constantly maintained through an assistant and a corps of specially selected contact men. Five different groups compose the quality department, each group representing one of the five general units of production, as follows:—

(1) **Mechanical details of chassis (engine, transmission and differential).**
(2) **Body (framing and paneling).**
(3) **Paint.**
(4) **Plated or stainless-steel parts.**
(5) **Upholstery.**

A highly proficient specialty man, working directly under the assistant to the vice-president, is assigned to each of these general production units. These men and their departments have nothing whatever to do with production or inspection; their function is strictly non-productive.

Heading Off Trouble

The quality department has proved an indispensable division of the company. It is effectually heading off trouble at the very source, and thus preventing it from coming up later when the car is in the hands of the owner.

Authority is given to this department to call a meeting of the production foremen and regular inspectors of any production division at any time. Any question concerning doubtful standard of workmanship or materials can be threshed out at this meeting and definitely settled on the spot. Such meetings are held in the vice-president's office, sometimes as often as two or three times a week. Only one subject is discussed at a meeting. For example, if the general inspection department's reports show that a certain number of bodies are written up for paint defects afer mounting, the quality department immediately assigns its paint specialist to check up the paint department. His job is to go to the very bottom of the trouble in the paint department, find out the actual causes that underly the trouble and see that they are entirely remedied.

All complaints, suggestions and criticisms sent in by distributors or dealers as well as all general inspection reports originating in the various divisions of the production department are checked carefully by this department. All complaints, regardless of source or kind, are tabulated, and the totals give a very true and clear picture of the production quality of every unit or part of the car and serve to focus attention at any point in production where attention is most needed. The corrections initiated by this department are all made through the inspection or the engineering department. If a change in design may be required, it is first thoroughly investigated by the quality department and then checked by the engineering or inspection department before being put in effect.

Securing Interest in Harmony

This department has found that the smoothest way to improve quality is to work with the foremen and operators and see that every man is inspired with a personal interest in his work. If a workman on a certain assembly or operation should, by accident, spoil a piece of material, he will then be interested enough to see that it is replaced by a good piece before the foreman or inspector is obliged to take up the matter with him.

Of course it is the earnest desire of the management that every operator should be so proficient as to carry on as far as possible without the aid of an inspector. This should be more nearly possible in our plant than in the rustle and bustle of the large-production plant, and the highest quality of individual workmanship is necessary to us.

One of the things that contributes most to the quality manufacture of an automobile is the harmony and co-operation between the various divisions, especially the production and inspection departments. If these departments are at loggerheads, it is not only difficult to get out schedule production; it is almost impossible to give the product the high quality demanded by the management and by the motor-wise car owner of today.

"I do not mean to intimate that we have more than the ordinary amount of trouble between the different departments," said Mr. Nicodemus, "but there are times when difficulties do arise in any plant. When such times have come, the quality department has justified its existence one hundred times over in its ability to straighten matters out quickly."

Replying to a question at the same meeting in regard to control of the engineering department by the production department, A. F. Carlson, assistant body engineer of the Pierce-Arrow company, said that the two departments should work closely in harmony. The Pierce-Arrow production department can suggest to the engineering department any changes that it finds necessary or desirable.

In no case was it recalled that the production department asked for a change that was not immediately investigated and, if found practical, approved wholeheartedly by the engineering department. Thus each department is ready and willing to help every other department in every possible way.

Muller Develops Racing Head for Ford Engine

Los Angeles, Feb. 20.—Racing officials and speed champions recently witnessed the first test of a new overhead-valve system at the Harry A. Miller factory. The system more than doubled the horse power of the Model A Ford engine, it is claimed.

The new Ford head combines the features of racing cars. It was designed by the Harry A. Miller organization, builders of racing cars. Tests were conducted on a Randzi dynamometer, which recorded the revolutions per minute and the brake power developed by the engine on the block.

According to witnesses, the regular Model A Ford engine and carburetor attained a peak of forty-one horse power at 2,400 revolutions per minute. When the overhead-valve system was installed, this horse power was increased to sixty-eight at 2,400 revolutions.

By replacing the Ford carburetor with a Miller carburetor this horse power was again stepped up to seventy-seven horse power at 2,400 revolutions, and at 3,200 revolutions it attained eighty-two horse power, exactly double the maximum for the regular Ford engine and carburetor.

TRI-STATE ARMATURE EXPANDING ITS PLANT

Memphis, Tenn., Feb. 20.—With a material growth in its business, the Tri-State Armature and Electrical Works is expanding its plant at 327 East Butler Ave. Plans for a new wing, containing 3,600 square feet are announced by L. H. Lanahan, secretary-manager. Site for the addition was purchased recently. It will be one story brick and steel factory type and work starts in ten days.

Stavely Discusses Tire Production And Performance

The compounding of the rubber and the processing of the fabric are the first manufacturing processes necessary in the construction of motor-vehicle tires, said J. W. Stavely of the Firestone Tire and Rubber Company, in a paper he presented at a meeting of the Northwest section and reported in the S. A. E. Journal. Continuing, Mr. Stavely stated that the rubber is placed on a mill equipped with horizontal rolls and, as it is worked, heat is generated and the rubber becomes soft and plastic. Various pigments such as sulphur, zinc oxide, accelerators and the like are added to the rubber while it is in the plastic state. A definite amount of these materials is used and the whole is mixed for a given time on a given type of mill having a given ratio and surface speed of the mill rolls. The mixture of these materials, when completed, is tested for dispersion and cure before being approved for production.

Calendering of Tire Fabric Outlined

The cord fabric, used in the tire casing, is passed through a calender which consists of three or four horizontal rolls mounted one above the other. These rolls may operate at odd or even speeds. Some manufacturers first impregnate the fabric with rubber before passing it through the calender because, in this manner, additional rubber insulation is obtained. The calendered fabric is processed with a high degree of precision, considering the fact that rubber is a plastic material. It is possible to calender fabric with rubber on a commercial basis within a tolerance of .0015 inches. The calendered fabric is cut on the bias to the proper width necessary to extend from bead to bead of the tire. The angle at which the fabric is cut is usually between 35 and 45 degrees. This angle largely determines the contour of the tire, a shorter angle giving a higher profile and a longer angle a lower profile. The general practice is to have the cords in the cured tire at an angle of 45 to 60 degrees at the crown of the carcass.

The amount of expansion during cure varies from 5 to 10 per cent. and is necessary to assure proper alignment of the individual cords that make up the carcass of the tire. This expansion is obtained by building the tire slightly smaller than the mold in which it is to be cured. An air bag is placed in the green tire and kept inflated during the vulcanization or cure. This internal pressure brings the outside of the tire in contact with the mold and provides the necessary pressure for the proper vulcanization into a compact unit.

Tire Treads and Beading Discussed

The tire tread of today represents a marked improvement over that of fifteen years ago. In those days most treads were white, because at that time zinc oxide was the generally accepted material for making the best-wearing tread. That was partly because this pigment could be obtained in a finer form than most materials. Later it was found that certain types of gas black are much finer than zinc oxide and make better-wearing treads; so, today, we find that practically all tire treads are black.

The tread of a tire is necessary, first, to give a long-wearing surface, and, second, to give a non-skid surface. The resistance of a tire tread to wear not only necessitates high-quality materials, properly fabricated, but also involves the design of both the tire and the tread. Thus a large area of contact of the tire tread with the road affords a greater tractive surface and distributes the wear over a larger area. However, there are limitations as to tread contour, as it is essential to avoid localizing the flexing action of the carcass.

The function of the cushion and breaker in a tire is to distribute the road-shock impact and shearing stress and thus overcome the tendency for localized action at the top of the tire carcass. The double-cord-breaker construction, which consists of two narrow plies of cord fabric over the crown of the tire, is used extensively in heavy-duty tires. This construction not only gives better distribution of road road shock in the large tires, but also gives a better anchorage of the tread to the carcass.

The plies of rubber-coated fabric that constitute the tire carcass are cut on the bias and assembled in the tire so that the cords in each ply run in the opposite direction to the adjacent plies. This gives greater strength and results in a more uniform distribution of load on the individual cords in the tire. Some manufacturers use an extra-heavy gauge gum between the plies of motor truck and motor coach tires. This provides additional insulation between the plies, thus overcoming any possibility of ply contact which might result in tire failure.

The beads of truck tires are made up of several plies of wire strands. Some beads are known as single beads and consist of one group of wires; others are of twin-bead construction consisting of two individual groups of wires in each bead. The twin-bead construction affords greater bead stability and permits a better anchorage of plies around the bead wire because a greater number of plies can be anchored around the twin beads and yet keep the bead as low as possible in the tire.

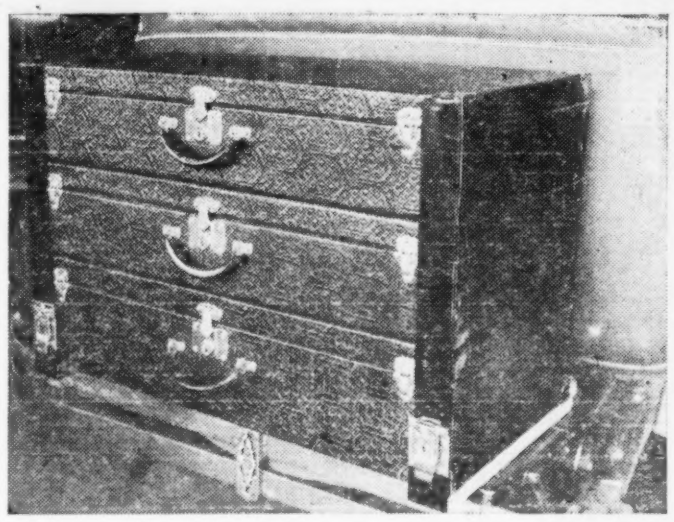
Conditions Influencing Tire Performance

Even though a truck be equipped with the right size of tire inflated to the recommended pressure, this is no assurance of satisfactory tire performance. The mechanical condition of the truck is very important. Wabbly wheels, dragging brakes, loose bearings, loose steering-gear or tie-rod connections and the like all contribute to premature wear.

The alignment of both front and rear ends is important. It is not an infrequent occurrence to find a negative camber in the rear wheels due to bent axles. This condition causes the inside of the inside dual-tire to wear prematurely and in an uneven manner. A rear end out of line with the frame or front end will also cause premature wear on rear tires.

The front-end alignment is a much discussed question, but probably all will agree that maximum tire wear will be obtained when the load is evenly distributed across the entire tire tread and with the wheels moving in a straightforward direction when loaded.

A camber of 1 degree with the truck loaded, should not cause premature tire wear. There is, in fact, a marked tendency in this direction in modern car design. With a given camber setting the Feragen three-way testing-board is a good means of determining the amount of toe-in that will give minimum scuffing. Incorrect toe-in is one of the greatest offenders as regards tire wear and one of the simplest conditions to correct.



SAMPLE CASE unit shown above shows the arrangement of various compartments with steel strips, locked at the bottom, holding cases in place. Each compartment is held at the back by interlocking corners. A one-piece water and dustproof cover fits over the entire assembly

Ideal Mfg. Co. Offers Handy Sample Case Unit

A SECTIONAL luggage or sample case unit, furnished in an assortment of sizes to fit different requirements, has been developed by the Ideal Manufacturing Company, 977 State St., Bridgport, Conn., and will shortly be placed in production, according to E. E. Bouchard, president.

Each case forms a complete unit with steel strip locks right and left holding the assembled cases in place with rubber cushions between each to prevent vibration. Each case is held at the back with interlocking corners. A dust and water proof cover goes over the cases, fastening to a bottom piece.

Flexibility of the unit is stressed as one of its chief advantages, there being practically no limit to the number of cases which can be used, as well as various sizes. The unit will fit all standard trunk racks. According to Mr. Bouchard, the cost of the unit will be less than where a trunk is used to hold separate cases, and any individual case can be reached within one minute's time. Needs of traveling salesmen for a number of cases to be carried in a small space were especially considered in designing the unit, Mr. Bauchard says. Thicknesses of the cases can be varied according to individual requirements.

CUMULATIVE NEW PASSENGER CAR

Returns for today:

States	Auburn	Austin	Black Hawk	Buick	Cadillac	Chevrolet	Chrysler	Cord	DeSoto	Dodge	Durant	Elcar	Erskine	Essex	Ford	Franklin	Gardner	Graham	Hudson	Hupmobile	Jordan	La Salle
Delaware				30	1	95	3			2	11			11	195	2		2	6	4		4
Illinois	49		9	746	41	3140	229	15	199	396	108		48	305	4260	42	5	137	161	171	8	98
Maryland	3		1	54	4	653	42	1	23	31	22		6	75	918	3		33	32	20	2	3
Totals	52		10	830	46	3888	274	16	222	429	141		54	391	5373	47	5	172	199	195	10	105
Dela're, '29	6			20	9	87	8			8	12		1	31	176	3		4	2	5		10
Illinois, '29	111			800	159	1721	451		245	786	201	19	48	719	5348	30	20	321	203	142	15	100
Mary'd, '29	9			109	5	506	62		21	72	33		7	206	903	7	1	13	45	29		13

Car Distributor Boosts Slack Shop Work With Special Group Jobs at a Price

SOMETIMES a car distributor or dealer finds it a considerable problem to maintain his service or repair shop department intact during a slump in work, and has no little difficulty in devising a plan whereby the men may be held together and the plant kept busy. The Teefy-Seltz Company, Inc., Auburn and Cord distributor, Philadelphia, has used with success the following method of holding its mechanical force as a unit and keeping the men at work during temporary lulls:—

The advertising and sales promotion department mails direct to car owners bulletins offering money-saving opportunities to have certain combinations of work done on their cars at special prices. The most recently issued bulletin of this kind, the special offer of which expires on February 28, is a good example. It is a two-sheet announcement, multigraphed on buff paper, bearing not the regular letterhead but a dark brown, harmonizing heading, setting forth a single advertising feature, namely, "Teefy-Seltz Headlights and Sidelights on Auburn." A cut of a portion of the car front, emphasizing the lights, is centered in the heading, while just beneath is a comic illustration appropriate to the theme and occupying about half the upper space of the first sheet. This illustration shows a puzzled car owner explaining to an animated oil can, "My car's got no pep," while the freely gesturing can replies with a smile, "Why doncha give it a chance?"

* * *

The bulletin starts off thus:—

"YOUR automobile can't keep that old summer time pep unless you keep it in trim to ward off winter ills. It needs good lubrication, clean valves, a well-oiled chassis and good, safe brakes.

"HERE'S YOUR CHANCE TO SAVE MONEY

"For the benefit of all automobiles that need a good winter tonic, the Teefy-Seltz Company is offering this special consideration:

"We will do the following work on your car for—$49.50 on eight-cylinder cars, $46.50 on six-cylinder cars:

"GRIND VALVES, CLEAN CARBON, TUNE MOTOR
"USUAL CHARGE

"Eight-cylinder cars, $16; six-cylinder cars, 13.

"Sticky valves will slow up your motor; excess carbon will make the hills steeper. We will grind the valves velvet-smooth, clean out all the carbon and give the motor a thorough tuning. When we get through it'll purr-r-r like a kitten.

"OIL AND GREASE
"USUAL CHARGE $2

"A good oiling and greasing is very necessary in the winter time, when your car gets hard usage from the weather man. We will oil and grease your car, which includes spraying the chassis and springs.

"INSTALL NEW PUROLATOR
"USUAL CHARGE $4.50

"After your car has gone 8,000 miles the Purolator cartridge gets filled with dirt and grit. If the cartridge is not changed, this debris goes back into your crankcase and is liable to do harm. A new cartridge will send good, clean oil to the working parts of your motor.

"TIGHTEN UP CHASSIS
"USUAL CHARGE $7

"We will tighten up the entire chassis, including fender bolts, trunk rack and body bolts. (This does not include tightening up of the body.)

"RELINE AND ADJUST BRAKES
"USUAL CHARGE $22.50

"We will reline and adjust your brakes, clean out the fluid in the brake system anr refill with new fluid.

"WASH, POLISH, SIMONIZE
"USUAL CHARGE $16

"After putting your car in good running condition, we'll send it through the laundry, and you'll hardly recognize it after a good wash, polish and Simonize.

"HERE'S WHAT YOU SAVE

Grind valves, etc.	$16.00
Oil and grease	2.00
Install Purolator	4.50
Tighten chassis	7.00
Reline brakes	22.50
Wash and polish	16.00
USUAL CHARGE	$68.00
SPECIAL PRICE (8-cylinder)	49.50

"SAVING $18.50

"THIS SPECIAL OFFER EXPIRES ON FEBRUARY 28. BRING YOUR CAR IN THIS WEEK AND TAKE ADVANTAGE OF THIS EXCEPTIONAL SAVING.

"TEEFY-SELTZ CO., INC., "1419-21 SPRING GARDEN ST."

It will be noted that stress is placed on the large saving made by the customer in accepting the entire combination at a special price. If he does not wish it as a whole, the regular prices are charged, of course, for such servicing as he desires, this fact being made plain to inquirers.

Educating Car Buying Public To Judicious Selection Pays

THE buying public should be educated to the fact that judicious selection of a motor car best suited to the buyer's needs and means is more of an investment of decided advantage to the individual than an article which the dealer is anxious to sell his public.

Such an attitude creates a new scheme of relationship between customer and dealer—the promotion of a lasting interest, which signifies mutual satisfaction to both parties represented in the bill of sale.

The foundation of successful salesmanship, which implies the satisfaction of the customer after purchase, is based on this principle, in the opinion of John W. Walton, president of the Lincoln Motor Company, Buick dealer, Evansville, Ind., who trains his sales staff in the theory that making the prospect "want a Buick" is a prime consideration.

* * *

IN practice, such a theory must necessarily imply a comprehensive course specifically applying to the product represented by the dealer. Salesmanship training, according to the Walton system, becomes as systematically conducted as an academic study.

Roughly speaking, his system consist in the main of making the salesman familiar with the history of the car he represents, its development, and the point and purpose of every unit which enters into its construction, the reasons it has won success in the past and foundation on which its success in the future rests—to know its past performances and the reputation for dependability which such performance must win.

A specially prepared chart enters into the course in sales lectures which are religiously followed five mornings of each week. But that there may be a just proportion of theory and practice the salesman is required to give his personal experience of the car's performance for the benefit of his fellow salesman—first-hand evidence, in other words, in linking of theory with practical every-day fact. Enthusiasm is a close follower of confidence in car performance.

The salesman also sells service in the Walton plan, which is to say that he is well-informed on the qualifications and advantages this department affords for the lasting satisfaction of the customer.

* * *

MR. WALTON ranks this department for its true worth: that the satisfied customer is the biggest influence for future business. His service men have been in the employ of the Lincoln Motor Company for nine years or more. When the Buick owner drives his car into the shop he is told the exact amount the job will cost before any work is started, to the total exclusion of "abouts" and "extras."

Service goes further. It is a factor for establishing the confidence of the buyer with his first Buick. A ninety-day guarantee accompanies the sale of every new car, which is to say that twice during that period the car is given a complete inspection free of charge.

And then the individual incentive to a good sales record. Bonuses are in order for certain seasons of the year in addition to the regular salary and commission remuneration.

"Not because the bonus directly reveals a notable increase in volume of cars sold, so much as the maintenance of good selling morale, the promotion of good fellowship among the staff, the sporting thrill and enthusiasm which such campaigns and contests can develop are valuable influences toward a good day's sales," Mr. Walton explains.

* * *

IN the twenty years he has been in business he has rated his car owners as first in prospect importance, "the best asset for any dealer—a satisfied car owner." Direct calls are ranked as next best in the development of profitable sales contacts.

The used car is not a thing aloof from the business of selling new cars. The Lincoln Motor Company sees a twofold sales advantage in getting in touch with the owner of a car which will make good in the trade-in transaction. A list of such promising prospects is kept and, at opportune time, such contacts are developed.

"Stunts and superlative statements have little value in sales making," he asserts. "I believe there is no more forceful statement in advertising than straightforward fact. Special sales can be overdone. I have no faith in the value of a sale for a sale. Such sales are no sales at all when it comes down to dollars and cents to the dealer. I confine my special sales to two a year. Last year I had no used car sales, and I believe just now that I have as low a used car stock as any dealer in Evansville."

Mr. Walton evidences his faith in the profitable future for the used car with the announcement of plans for erection of a modern building to handle used car sales exclusively.

* * *

BUILDING contractors have begun work toward erection of a modern fireproof brick building of one story to cost $12,000. It will be constructed of brick, concrete and steel, and will measure 50 feet front and 150 feet deep. It will extend from Market Street to 4th Street, near Ingle Street. The building, which will be large enough for displays of forty used cars, will be completed about April 1, with a public dance as the opening feature.

Ask Us To Tell You—

IN presenting this service department, The Automotive Daily News is actuated by the desire to help its readers solve their problems, whether these are merchandising, technical or in the field of general automotive information. We shall be glad to have our readers ask us any questions pertaining to the automotive field.

In some instances readers may desire information which will require an expenditure of money to secure, and in such cases we shall be glad to get the desired data at the least possible cost, or we shall inform our readers where they may obtain it most economically and expeditiously.

In cases where the reader desires an immediate reply, we would suggest that he inclose a self-addressed and stamped envelope. Other inquiries will be printed in the paper from day to day in the order in which they are received.

Under the heading "engine speed to car speed," there appeared in yesterday's Automotive Daily News a formula, which due to typographical make-up was not clear. This formula should have read:—

$$\frac{\frac{(\text{M. P. H.}) \times 5{,}280}{60}}{\frac{44 \times (\text{Tire Diam.})}{14 \times 12}} \times (\text{gear ratio}) = \text{engine r. p. m.}$$

That is (speed of car times 5,280 divided by 60) divided by (44 times tire diameter divided by 14x12) times the gear ratio of the car, equals the speed of the engine in revolutions per minute.

MARMON HORSE POWER

QUESTION: Will you be good enough to tell me what is the maximum horse power developed by the Marmon car known as the eight sixty-nine? This is an eight-cylinder engine, I believe.

K. M., Altoona, Pa.

ANSWER: All four cars in the Marmon 1930 line are eight-cylinder jobs. The 8-69 is listed by the manufacturer as developing 84 horse power at 3,400 revolutions per minute. This is what is known as brake horse power and not the formula used in fixing taxation.

PRODUCTION FIGURES

QUESTION: In the figures given out for total production, are the cars manufactured by American companies in Canadian plants included. R. M. O., Tucson, Ariz.

ANSWER: In the grand total not only Canadian figures, but the outputs of American assembly plants in foreign countries generally are included. Usually some statement is appended to indicate just what figures are included in any given compilation.

TOURING SERVICE

QUESTION: Can you tell me the best route between New York and Florida and the approximate time it would take me to make the trip?

C. Z., Bergenfield, N. J.

ANSWER: The Socony Touring Service at 26 Broadway, New York city, would, no doubt, be in a better position to give you information on roads and road conditions. This company maintains an extensive touring service and we suggest that you get in touch with them. Also may we suggest the American Automobile Association.

FOREIGN INFORMATION

QUESTION: Where can I obtain information regarding registrations, sales and so forth on automobiles in foreign countries?

P. B., Wilmington, Del.

ANSWER: Communicate with the Automotive Division of the Department of Commerce at Washington, D. C.

CHASSIS LUBRICATORS

QUESTION: Some time ago I saw an advertisement in your paper regarding a magazine type of chassis lubricator which is particularly advantageous for use on trucks. I have mislaid the copy in which this item appeared. Can you tell me the name and address of the manufacturer? J. M., Chicago.

ANSWER: The lubricator to which you refer is no doubt the Myers magazine chassis lubricator, manufactured by the Chassis Lubricator Company, Rahway, N. J.

Coming Automobile Shows

Albuquerque, N. M.—At Armory.....Feb. 27-March 1
Altoona, Pa.—At Allegheny Furnace.....Feb. 21-Mar. 1
Bloomington, Ill.,—At Coliseum.....Feb. 19-22
Bloomington, N. J......Feb. 19-22
Calgary, Alberta.....Feb. 27-March 1
Camden, N. J......Feb. 24-March 1
Des Moines, Ia......Feb. 24-March 1
Duluth, Minn.—Head of the Lakes Automotive Trade Association, Armory.....Feb. 17-22
Elkins, W. Va.—At Elkins Garage.....March 27-29
Enid, Okla......March 3-8
Evansville, Ind.—Automobile Dealers' Association, Memorial Coliseum, 19th Annual.....Feb. 25; March 1
Fall River, Mass......Feb. 24-Mar. 1
Henderson, N. C......Apr. 28-May 3
Holyoke, Mass......Feb. 20-22
Houston, Tex.—South Texas Show.....March 11-15
Indianapolis, Ind......Feb. 15-22
Lincoln, Neb.—At University of Nebraska.....March 24-29
Los Angeles, Cal.—Los Angeles Motor Car Dealers' Association, Feb. 22-March 2
Michigan City, Ind.....Feb. 21-23
Milan, Italy.....April 12-27
Moline, Ill......Mar. 13-15
Muncie, Ind.—At North Walnut Street Field House.....Mar. 20-22
New Castle, Pa.,—In the Cathedral.....Feb. 27-29
New Orleans, La......March 15-20
New Ulm, Minn.....Feb. 20-22
Nice, France.....March 16-30
Oil City, Pa......Feb. 25-Mar. 1
Omaha, Neb.—Automobile Trade Association, Ak-Sar-Ben Coliseum, Feb. 17-22
Providence, R. I.—At Cranston Street Armory.....Feb. 15-22
Red Bank, N. J.—Monmouth County Automobile Show at Armory, Feb. 15-22
Seattle, Wash.—Automobile Show and Transportation Pageant, Civic Auditorium.....Feb. 25-March 2
Sioux City, Ia.—At Armory.....March 5-8
Spokane, Wash.—Dealer's Progressive Show.....March 8-16
Trenton, N. J.—At Armory.....Feb. 15-22
Waterbury, Conn.—At State Armory.....Feb. 17-22
Watertown, N. Y......Feb. 19-22

REGISTRATION TABLE, JANUARY, 1930

Delaware, Maryland

States	Lincoln	Marmon	Marmon-Roosevelt	Marquette	Nash	Oakland	Oldsmobile	Packard	Peerless	Pierce-Arrow	Plymouth	Pontiac	Reo	Studebaker	Stutz	Viking	Whippet	Willys	Willys-Knight	Windsor	Miscellaneous	Totals
Delaware				1	13	7	4	8			8	24	1	1			3	4			1	441
Illinois	57	35	46	30	211	119	243	170	79	37	303	354	74	233	19	15	119	114	77	8	45	12,555
Maryland	3	8		11	34	21	42	15	6	14	28	88	14	28	2	1	24	23	9		1	2,298
Totals	60	43	46	42	258	147	289	193	85	51	339	466	89	262	21	16	146	141	86	8	47	15,294
Dela're, '29					21	13	13	9			6	11	1	4			21				1	482
Illinois, '29	92	30			453	256	221	232	30	20	262	536	94	358	36		499		123	15	117	14,813
Mary'd, '29	9	9			80	18	41	26	6	3	43	51	6	44	3		129		20	1	35	2,565

CAMDEN A. T. A. ELECTS OFFICERS AND COMMITTEES

Camden, N. J., Feb. 20.—Preparations for the $100,000 automobile show to be held in Convention Hall in this city, starting February 24, are rapidly being completed by officials and committees of the Camden Auto Trade Association.

Officers of the Camden Auto Trade Association recently elected are Barton S. Muir, president; John Gardner, treasurer, and C. B. Richardson, secretary. The board of governors consists of W. J. McKenna, H. Morgan Hatch, L. L. Schroedel, John D. S. Ingram and G. W. Gibbs. The show committee of the association is composed of W. J. McKenna, H. Morgan Hatch, Watson Shallcross, Donald Danenhower and Henry S. Volmer. Mahlon H. Ivins is show manager.

MAJOR SPECIFICATIONS AND MECHANICAL DETAILS OF

Make and Model	Capacity—tons	Chassis price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gearset	Location	No. Spds. for	Rear Axle	Final Drive	Reduction in Low	Brakes, foot	Brakes, hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Am. La France Chief	2	3650	Own	6	3¾x5	33.0	Pw	Str	Vac	Rem	Own	C	4	Tim	Wo	31.2	4	D	156	6200	32x6	32x6 D
Am. La France W	3-4	3950	Own 2 R	4	4¼x6	28.9	P&S	Zen	Vac	A B	Own	C	4	Own	D R	47.4	D	R	160	7200	S 36x5	S 36x5 D
Am. La France S	4-4½	5200	Own 5 R	4	4¾x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	Wo	54.4	D	R	165	8900	S 36x6	S 36x6 D
Am. La France V	5	5500	Own 5 R	4	4¾x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	Wo	54.4	D	R	165	9800	S 36x5	S 40x6 D
Am. La France Z	6½	5750	Own 5 R	4	4¾x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	Wo	63.5	D	R	165	10000	S 36x7	S 40x7 D
Am. La France U	7½	6000	Own 5 R	4	4¾x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	—	63.5	D	R	165	10500	S 36x7	S 40x8 D
Am. La Fran. Big Chief	6	6725	Own	6	4½x6	48.6	Pw	Zen	Vac	Rem	Own	C	4	Own	D R	32.8	W	D	226	10600	S 40x8	40x8 D
Autocar S A	1½	2700	Her	6	3¾x4½	33.8	Pb	Zen	Vac	L-N	Br-L 35	U	4	Own S A	Sp	27.9	4	R	150	4400	32x6	32x6
Autocar S D	2	3000	Her	6	3¾x4½	33.8	Pb	Zen	Vac	L-N	Br-L 35	U	4	Own S D	D R	33.9	4	R	150	4850	32x6	32x6 D
†Autocar H	3	3750	Own	4	4½x5½	32.4	C S	Str	Gra	A B	Own T	U	4	Own H	D R	48.9	R	R	114	5800	34x5 S	36x10 S
†Autocar S H	3	4000	Her	6	4⅛x4¾	40.8	Pb	Str	Gra	R B	Own T	U	4	Own H	D R	48.9	R	R	114	5800	34x5 S	36x10 S
Autocar T	3	5000	Her	6	4⅜x4¾	45.9	Pb	Str	Vac	R B	Own T	U	4	Own T	D R	72.5	R	R	187	7100	36x8	36x8 D
†Autocar H S	3½	4100	Own	4	4½x5½	32.4	C S	Str	Gra	A B	Own T	U	4	Own J	D R	55.2	R	R	114	6900	34x6 S	36x12 S
†Autocar S H S.	3½	4400	Her	6	4⅜x4¾	45.9	Pb	Str	Gra	R B	Own T	U	4	Own J	D R	55.2	R	R	114	7000	34x6 S	36x12 S
Autocar T S	3½	5350	Her	6	4⅜x4¾	45.9	Pb	Str	Vac	R B	Own T	U	4	Own Chs	D R	81.7	R	R	187	7100	36x8	36x8 D
Autocar S C M	5	5000	Her	6	4½x4¾	48.6	Pb	Str	Vac	R B	Own B	C	4	Own M	D R	72.1	R	R	162	8600	34x7 S	36x14 S
Brockway 65	1	1195	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Aut	Br-L 20	U	4	Col 36020	Sp	21.3	4	Tr	137	3400	30x5	30x5
Brockway 75	1¼	1290	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Aut	Br-L 20	U	4	Col 36020	Sp	25.6	4	Tr	137	3450	32x6	32x6
Brockway 90	1½	1525	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 55001	Sp	25.6	4	Tr	149	3850	32x6	32x6
Brockway Junior	1	1195	Wis C	4	3¾x5	22.5	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36020	Sp	21 27	4	Tr	130	3100	30x5	30x5
Brockway J F	1	1195	Wis F	6	3¼x4¼	25.4	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36020	Sp	21.3	4	Tr	137	3450	30x5	30x5
Brockway C J B F	1½	1475	Wis F	6	3¼x4¼	25.4	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 55001	Sp	21.3	4	Tr	149	3650	32x6	32x6
Brockway E	1½	1765	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	L-N	Br-L 30	U	3	Col 55001	Sp	21.0	4	Tr	139½	3650	32x6	32x6
Brockway S	2	2450	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	L-N	Br-L 30	U	4	Wis 4610	D R	38.79	R	Tr	150¼	5100	S 34x4	S 34x8
Brockway S Y	2	2950	Wis Y	6	3⅜x5	27.3	Pb	Zen	Vac	L-N	Br-L 35	U	4	Wis 4610	D R	35.3	4	Tr	151⅝	4950	32x6	34x7
*Brockway K	3	3420	Con K	4	4⅛x5¼	27.2	Pw	Zen	Vac	Eis	Br-L 35	C	4	Tim 65700	Wo	41.5	R	D	154⅛	5855	S 36x5	S 36x10
Brockway K R	3	3625	Con L	4	4½x5½	32.4	Pw	Zen	Vac	Eis	Br-L 55	C	4	Tim 65700	Wo	36.38	R	D	160⅝	6290	S 36x5	S 36x10
Brockway K W	3	3950	Wis H	6	4 x5	38.2	Pb	Zen	Vac	L-N	Br-L 51	U	4	Wis 1228	D R	33.7	R	D	170	6920	34x7	D 34x7
*Brockway R	4	4200	Con L	4	4½x5½	32.4	Pw	Zen	Vac	Eis	Br-L 55	C	4	Tim 66600	Wo	46.8	R	R	164	7890	S 36x5	S 36x12
Brockway T	5-7	5200	Con B 7	4	5 x6	40.0	Pw	Zen	Vac	Eis	Br-L 60	C	4	Tim 68700	Wo	53.5	R	D	175	10065	S 36x6	S 40x14
Chevrolet	½	365	Own	6	3⅛x3¾	26.3	C S	Car	P	Rem	Own	U	3	Own	Sp	12.68	4	R	107	1815	4.50x20	4.50x20
Chevrolet	1½	520	Own	6	3⅛x3¾	26.3	C S	Car	P	Rem	Own	U	4	Own	Sp	6.165	4	R	131	2375	30x5	30x5
Commerce 20 Y	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	B 30x5	B 30x5
Commerce S 11 Y	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	B 30x5	D B 30x5
Commerce 30 Z	1½	2900	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	B 34x5	D B 34x5
Commerce 40 Z	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	B 36x6	D B 36x6
Commerce 50 Z	2½	4415	Bud B U S	6	4 x5¼	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7000	S 36x5	S 36x10
Commerce 60 Z	3	4480	Bud B U S	6	4 x5¼	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7100	S 36x5	S 36x12
Commerce 70 Z	3½	5250	Bud B A 6	6	4⅛x5¼	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8200	S 36x6	S 36x12
Commerce 80 Z	4	5330	Bud B A 6	6	4⅛x5¼	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8400	S 36x6	S 36x14
Day Elder M F	1¼	1345	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Rem	Br-L	U	4	Tim 52000 H	Sp	24.2	4	D	131	3500	30x5	30x5
Day Elder G F	1½	2100	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Rem	Br-L	U	4	Tim 54000 H	Sp	28.3	4	D	156	4400	30x5	30x5 D
Day Elder H F	2	2550	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Rem	Br-L 35	U	4	Tim 63702 H	Wo	40.7	4	D	156	4900	S 34x4	S 34x7
Day Elder J F	3	3900	Con 18 R	6	4 x4½	38.4	Pb	Zen	Vac	Rem	Br-L 51	U	4	Tim 65001 H	Wo	41.5	4	D	156	6900	34x7	34x7 D
Day Elder K F	4-5	5000	Con 21 R	6	4⅝x4¾	45.9	Pb	Zen	Vac	Rem	Br-L 60	C	4	Tim 66702 DH	Wo	55.2	4	D	162	9500	S 36x5	S 36x12
Diamond T 200	1	785	Buda	4	3¼x4½	22.5	P P	Zen	P	A-L	W-G	U	4	Clark	Sp	—	4	D	128⅛	2700	30x5	30x5
Diamond T 215	1	885	Buda	6	3⅜x4	27.3	P P	Zen	P	A-L	W-G	U	4	Clark	Sp	—	4	D	135⅛	2850	30x5	30x5
Diamond T 290	1½	1475	Her WXA 2	6	3½x4½	29.4	Pb	Zen	Vac	A-L	Cov	U	4	Col	Sp	—	4	D	156¼	4160	30x5	30x5 D
Diamond T 303	2	1745	Her WXB	6	3¾x4½	33.7	Pb	Zen	Vac	A-L	Cov	U	4	Tim	Sp	—	4	D	160½	4850	32x6	32x6 D
Diamond T 551	2½	2250	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	A-L	Cov	U	4	Tim	Sp	—	4	D	168	5600	32x6	32x6 D
Diamond T 503	2½	2660	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	A-L	Cov	U	4	Tim	Wo	—	4	D	174	5900	34x7	34x7 D
Diamond T 506	2½	2820	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	A-L	Cov	U	4	Wisc	D R	—	4	D	172½	5900	34x7	34x7 D
Diamond T 602	3	3440	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	A-L	Cov	A	4	Tim	Wo	—	4	D	169½	7500	36x8	36x8 D
Diamond T 606	3	3500	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	A-L	Cov	U	4	Wisc	D R	—	4	D	186	7500	36x8	36x8 D
Diamond T 700	3½	3740	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	A-L	Cov	A	4	Tim	Wo	—	R	D	162	8100	S 36x5	S 36x10
Diamond T 801	4	4140	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	A-L	Br-L	A	7	Own	Wo	—	4 R	D	189½	8300	36x8	4 wh 36x8
Diamond T 1000	5	4420	Her YXC 2	6	4½x4¾	48.6	Pb	Zen	Gra	A-L	Br-L	A	4	Tim	Wo	—	R	D	170½	9700	S 36x6	S 40x12
Diamond T 1600	8	6260	Her YXC 3	6	4⅝x4¾	51.3	Pb	Zen	Gra	A-L	Br-L	A	7	Tim	Wo	—	4RW	D	190	11700	36x8	4 wh 36x8 D
Diamond T 2500	10-12	8000	Wauk 6 RB	6	5 x5¾	60	Pb	Zen	Gra	A-L	Br-L	A	7	Tim	Wo	—	4RW	D	194	13100	S 36x7	S 4 wh 36x12
Dodge Bros.	½	665	Own	4	3⅝x4¼	21.03	Pb	Stw	Vac	N E	Own	U	3	Own	Sp	15.2	4	D	110	1965	29x5.00 B	29x5.00 B
Dodge Bros.	¾	775	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	Own	U	3	Own	Sp	17.4	4	D	120	2510	31x5.25 B	31x5.25 B
Dodge Bros.	1	995	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	W-G	U	4	Own	Sp	23.8	4	D	130	2920	30x5	30x5
Dodge Bros.	1	1065	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	W-G	U	4	Own	Sp	23.8	4	D	140	2955	30x5	30x5
Dodge Bros.	1½	1345	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	Own	U	4	Own	Sp	36.8	4	D	150	3695	32x6	32x6
Dodge Bros.	1½	1415	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	Own	U	4	Own	Sp	36.8	4	D	165	3810	32x6	32x6
Dodge Bros.	2	1445	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	41.4	4	D	114	3725	32x6	34x7
Dodge Bros.	2	1545	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	41.4	4	D	150	3930	32x6	34x7
Dodge Bros.	2	1615	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	41.4	4	D	165	4070	32x6	34x7
Dodge Bros.	3	1745	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	46.3	4	D	135	4225	32x6	32x6 D
Dover	¾	595	Own	6	2¾x4½	18.27	P&S	Mar	Vac	Aut	Own	U	3	Own	Sp	—	4	4	110	2150	30x5	31x5.50
Durant Com. Chassis	½	495	Con	4	3⅜x4¼	18.2	Pb	Til	Vac	Aut	Own	C	3	Own	Sp	16.16	4	4	107	1670	28x4.75	28x4.75
Fargo Packet	½	545	Own	6	3 x4⅛	21.6	Pb	Str	Vac	N E	Own	U	3	Own	Sp	14.29	4	Tr	—	1835	5.00x19	5.00x19
Fargo Clipper	¾	725	Own	6	3⅛x4¼	23.4	Pb	Str	Vac	Rem	Own	U	3	Own	Sp	15.53	4	Tr	—	2325	5.50x18	5.50x18
Fargo Freighter	1	795	Own	6	3 x4⅛	21.6	Pb	Str	Vac	N E	Own	U	4	Own	Sp	37.19	4	Tr	133	2785	6.00x20	32x6
Federal 4FW	1	980	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	Del	W-GT9	U	4	Cla B370	Sp	40.8	4	Tr	127	2975	30x5	30x5
Federal E6	1	1090	Con 17 E	6	3⅜x4	27.3	Pb	Zen	Vac	Del	W-GT9	U	4	Cla B370	Sp	34.6	4	Tr	132	3120	30x5	30x5
Federal F7	1½	1525	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	P	Del	Own	U	4	Tim 52005H	Sp	24.3	4	Tr	132	3750	30x5	30x5 D
Federal A6	2	1855	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Del	Own	A	4	Cla B610	Sp	38.5	4	Tr	151	4580	32x6	32x6 D
Federal A6T	2½	2185	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Del	Own	A	4	Tim 58000H	Sp	41.3	4	Tr	151	4950	32x6	32x6 D
Federal T10B	2½-3	2740	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	Vac	Del	Own	A	4	Tim 58000H	Sp	36.3	4	Tr	165	6600	34x7	34x7 D
Federal T10W	2½-3	2915	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	Vac	Del	Own	A	4	Tim 65001H	Wo	44.0	4	Tr	165	6600	34x7	34x7 D
Federal U6	3-3½	3860	Con 18 R	6	4 x4½	38.4	Pb	Str	Vac	Del	Br-L55	A	7	Tim 65706HP	Wo	64.6	4	D	165	7210	34x7	34x7 D
Federal 4C6A	4-5	4735	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	Vac	Del	Br-L55	A	7	Tim 66704HP	Wo	73.6	4	D	192	8330	36x8	36x8 D
Federal 4C6AB	4-5	4960	Con 20 R	6	4⅛x4⅜	40.8	Pb	Zen	Vac	Del	Br-L55	A	7	Tim 66704TWP	Wo	73.6	W4	D	192	8600	36x8	36x8 D
Federal X8	7½	5085	Con B 7	4	5 x6	40	Pw	Zen	Vac	AB	Br-L60	A	7	Tim 68700DP	Wo	110.9	R	D	162	9750	36x6 S	40x14 S
Federal X8R	7½	5810	Con 21 R	6	4⅝x4¾	45.9	Pb	Zen	Vac	Del	Br-L60	A	7	Tim 68700DP	Wo	110.9	R	D	162	10000	40x8	40x8 D
Ford A A	1½	520	Own	4	3⅞x4¼	24.0	P&S	Zen	Gra	Own	Own	U	4	Own	Wo	*16.1	4	4	131½	2282	6.00x20	32x6
F. W. D.—A	2	3300	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Cotta	C	4	Own	St	38.1	4	R	121	5300	34x7	34x7
F. W. D.—H 6	2	3425	Wak	6	3½x4½	29.4	Pb	Zen	Vac	Eis	Br-L	U	4	Own	St	35.0	4	R	133	5500	34x7	34x7
F. W. D.—B	3	4200	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	3	Own	St	35.6	4	R	124	6460	36x6 S	36x6 S
F. W. D.—B 5	3	4525	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	5	Own	St	88.6	4	R	132	6800	36x6 S	36x6 S
F. W. D.—U 6	3½	4575	Wak	6	4 x4¾	38.6	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7200	36x6 S	36x6 S
F. W. D.—BTL 4	2	3900	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	84.7	4	R	120	6000	36x8	36x8
F. W. D.—B T	3	4742	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	101.0	4	R	133¾	7700	40x7 S	40x5 S D
F. W. D.—U 4	3	4575	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7000	36x6 S	36x6 S
F. W. D.—X 6	6	6500	Wak	6	4¼x4¾	43.3	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	4	170	9500	36x8	36x8
Garford 20 Y	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	B 30x5	B 30x5
Garford S 11 Y	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	B 30x5	D B 30x5
Garford 30 Z	1½	2990	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	B 34x5	D B 34x5
Garford 40 Z	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	B 36x6	D B 36x6
Garford 50 Z	2½	4419	Bud B U S	6	4 x5¼	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7000	S 36x5	S 36x10
Garford 60 Z	3	4480	Bud B U S	6	4 x5¼	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7100	S 36x5	S 36x12
Garford 70 Z	3½	5250	Bud B A 6	6	4¼x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8200	S 36x6	S 36x12
Garford 80 Z	4	5330	Bud B A 6	6	4¼x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8400	S 36x6	S 36x14
Gen. Mot. T 11-1001	*3800	625	Pontiac	6	3⅛x3¾	26.3	Pb	Mar	P	Rem	Pontiac	U	3	Pontiac	Sp	14.67	4	D	109⅝	1980	5.00x19 B	5.50x19 B
Gen. Mot. T 19-2001	*8000	1015	Pontiac	6	3⅛x3¾	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127¾	3075	32x6	34x7
Gen. Mot. T 19-2002	*8000	975	Pontiac	6	3⅛x3¾	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127¾	3000	30x5	30x5 D
Gen. Mot. T 19-2003	*6000	895	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127¾	2925	5.50x20 B	32x6
Gen. Mot. T 25-2501	*8000	1285	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127¾	3575	32x6	34x7
Gen. Mot. T 30-3001	*10000	1530	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Eat 1616	Sp	28.6	4	D	136	4200	32x6	36x6
Gen. Mot. T 30-3002	*10000	1505	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Eat 1616	Sp	28.6	4	D	136	4125	32x6	32x6 D
Gen. Mot. T 30-3003	*8000	1395	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Eat 1616	Sp	28.6	4	D	136	4075	6.00x20 B	34x7
Gen. Mot. T 42-4001	*12000	1885	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Own	Sp	33.38	4	D	136	4690	32x6	38x9
Gen. Mot. T 42-4002	*12000	1790	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Own	Sp	33.38	4	D	136	4640	32x6	32x6 D
Gen. Mot. T 42-4003	*10000	1685	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Own	Sp	33.38	4	D	136	4510	7.00x20 B	36x8

1930 COMMERCIAL CARS BUILT IN THE UNITED STATES

Make and Model	Capacity—tons	Chassis price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gearset	Location	No. Spds. for.	Rear Axle	Final Drive	Reduction in Low	Brakes, foot	Brakes, hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Gen. Mot. T 60-5001	*16000	3215	Buick	6	3⅝x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 65706-N	Wo	44.81	4	D	140	6090	38x7	44x10
Gen. Mot. T 60-5002	*18000	3160	Buick	6	3⅝x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 65706-N	Wo	44.81	4	D	140	6425	36x8	36x8 D
Gen. Mot. T 60-5003	*14500	2800	Buick	6	3⅝x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 65706-N	Wo	44.81	4	D	140	6090	36x6	36x6 D
Gen. Mot. T 60 S-6101	*22000	3960	Buick	6	3⅝x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 66704-N	Wo	63.84	4	D	140¾	6920	38x7	38x9 D
Gen. Mot. T 60 S-6102	*19000	3695	Buick	6	3⅝x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 66704-N	Wo	63.84	4	D	140¾	6890	36x8	36x8 D
Gen. Mot K 102-6001	*28000	4250	Own 89	4	4½x6½	32.4	Pw	Zen	Vac	Eis	Mun	C	7	Tim 67600	Wo	86.3	R	R	160	9520	36x6 S	40x14 S
Gen. Mot. K 102-6002	*28000	4350	Own 89	4	4½x6½	32.4	Pw	Zen	Vac	Eis	Mun	C	7	Tim 67600	Wo	86.3	R	R	184	9600	36x6 S	40x14 S
Gotfredson RB-26	1¼	1295	Cont	6	3⅜x4	27.3	Pb	Joh	P	Rem	Br-L	U	4	Tim	Sp	—	4	D	Opt.	3400	30x5	30x5
Gotfredson RB-36	1½	1595	Cont	6	3⅜x4	27.3	Pb	Joh	P	Rem	Br-L	U	4	Tim	Sp	—	4	D	Opt.	3900	32x6	32x6
Gotfredson RB-46	2	2100	Her	6	3¾x4½	33.8	Pb	Joh	P	Rem	Br-L	U	4	Tim	Sp	—	4	D	Opt.	5140	32x6	34x7
Gotfredson RW-46	2½	2585	Her	6	3¾x4½	33.8	Pb	Joh	P	Rem	Br-L	U	4	Tim	Wo	—	4	D	Opt.	5600	34x7	34x7
Gotfredson RW-56	3	3395	Her	6	4 x4½	38.4	Pb	Joh	P	Rem	Br-L	U	5	Tim	Wo	—	4	D	Opt.	6600	S 36x5	S 36x5 D
Gotfredson RW-66A	3½	4475	Her	6	4⅜x4¾	45.9	Pb	Joh	P	Rem	Br-L	U	7	Tim	Wo	—	4	D	Opt.	7800	S 36x5	S 36x6 D
Gotfredson RW-86A	5	5200	Her	6	4⅜x4¾	51.3	Pb	Joh	P	Rem	Br-L	C	7	Tim	Wo	—	4	D	Opt.	9000	S 36x6	S 36x7 D
Gotfredson RW-106A	7½	5675	Her	6	4⅜x4¾	51.3	Pb	Joh	P	Rem	Br-L	C	7	Tim	Wo	—	4	D	Opt.	10000	S 36x7	S 36x8 D
Gotfredson RW-206A	12	10500	Bud	6	4¾ x6	54.15	Pb	Joh	P	Rem	Br-L	C	7	Tim	Wo	—	6	D	Opt.	14000	S 36x8	S 36x8 D
Gramm B	1½	1395	Lyc S	6	3¼ x4½	25.3	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	32	4	R	140	3300	30x5	30x5 D
Gramm C	2	1795	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	29	4	R	160	3800	32x6	32x6 D
Gramm D	2½	1995	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	30	4	R	160	4920	32x6	32x6 D
Gramm E	3	2795	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	35	4	R	150	5200	34x7	34x7 D
Gramm EY	3	3535	Con 20 R	6	4⅛x4¾	36.04	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	26	4	R	190	6750	32x6	32x6 D
Gramm GY	4	4345	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	P	L-N	Ful	U	4	Wis	D R	28	4	R	210	7200	34x7	34x7 D
Gramm HY	5	6545	Con 16 H	6	4¾x5¾	54.15	Pb	Zen	P	L-N	Ful	U	4	Wis	D R	25.2	4	R	236	9600	36x8	36x8 D
Gramm T-35	3	3595	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	39.6	4	R	173	7100	36x5 S	36x10 S
Gramm T-45	4	3995	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	39.6	4	R	173	7600	36x5 S	36x12 S
Gramm T-60	5	4745	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	—	4	R	173	8700	36x6 S	36x14 S
Hahn 7 H	¾-1	1098	—	6	2⅞x4¾	19.84	P	Zen	Vac	Aut	Br-L	U	3	—	Sp	5.8	4	D	124	3100	—	—
Hahn 17 H	1-1½	1430	Cont	6	3⅜x4	—	P	Zen	Vac	—	Br-L	U	4	Tim	—	5.8	4	D	142	3750	30x5	30x5
Hahn 37 H-37 H L	2-2½	1925	Cont	6	3⅜x4⅝	27.34	P	Str	Vac	—	Br-L	U	4	Tim	—	5⅞	4	D	153	4600	30x5	30x5
Hahn 39 H-39 H L	2½-3	2898	Cont	6	4 x4⅛	38.4	P	Str	Vac	—	Br-L	U	4	Tim	—	6⅛	4	D	164	5800	32x6	32x6
Hahn 47 H B-47 H B L	3-3½	3700	Cont	6	4 x4½	38.4	P	Str	Vac	—	Br-L	U	4	Tim	—	7.8	4	D	151	6900	34x7	34x7
Hahn 47 H D-47 H D L	3½-4	3900	Cont	6	4 x4½	38.4	P	Str	Vac	—	Br-L	U	4	Tim	—	7.8	4	D	151	7500	34x7	34x7 D
Hahn 67 H-67 H D	4-5	4950	Cont	6	4⅜x4¾	45.94	P	Str	Vac	—	Br-L	U	4	Tim	—	10.8	4	D	151	8842	36x8	36x8 D
Indiana 200	1	1195	Wis F	6	3¼x4½	25.3	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36000	Sp	20.71	4	Tr	137	3400	30x5	30x5
Indiana 300	1½	1475	Wis F	6	3¼x5¼	25.3	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 55001	Sp	21.26	4	Tr	149	3650	32x6	32x6
Indiana 111 X W	2	1850	Her Ox	4	4 x5	25.6	Pb	Str	Vac	Eis	Br-L 35	U	4	Wis 4611	Sp	36.60	R	Tr	120	3830	32x6	32x6 D
Indiana 400	2	2495	Wis Y	6	3⅜x5	27.3	Pb	Str	Vac	Aut	Br-L 35	U	4	Cla B 506	Sp	30.33	4	Tr	157	4800	32x6	34x7
Indiana 115 A	2½	2740	Her Ox	4	4 x5	25.6	Pb	Str	Vac	Eis	Br-L 35	U	4	Cla B 720	Sp	42.80	R	Tr	132	5000	32x6	34x7 D
Indiana 615 A	2½	3070	Wis Y	6	3⅜x5	27.3	Pb	Str	Vac	Eis	Br-L 35	U	4	Cla B 720	Sp	30.33	R	Tr	136	5190	32x6	34x7 D
Indiana 126	3	3495	Her L	4	4½x5¾	32.4	Pb	Str	Vac	Eis	Br-L 557	C	7	Tim 65704	Wo	80.7	R	Js	162½	7400	36x5	36x10 S
Indiana 127	3	3190	Her K	4	4¼x5¾	28.9	Pb	Str	Vac	Eis	Br-L 51	U	5	Cla B 720	Sp	41.72	R	R	141	6490	32x6	34x7 D
Indiana 626	3	4185	Wis H	6	4 x5	38.4	Pb	Str	Vac	Eis	Br-L 55	C	7	Tim 65704	Wo	80.7	R	Js	168½	7625	36x6 S	36x10 S
Indiana 627	3	3725	Wis H	6	4 x5	38.4	Pb	Str	Vac	Aut	Br-L 55	U	4	Cla B 720	Sp	42.80	R	R	162½	6500	36x5 S	36x10 S
Indiana 127 A W	3	3625	Her K	4	4¼x5¾	28.9	Pb	Str	Vac	Eis	Br-L 51	U	5	Wis 69311	Sp	41.72	R	Tr	141	6800	32x6	34x7 D
Indiana 627 A W	3	3925	Wis H	6	4 x5	38.4	Pb	Str	Vac	Eis	Br-L 51	U	5	Wis 69311	Sp	41.72	R	Tr	147	6800	32x6	34x7 D
Indiana 138	4	4380	Her L	4	4½x5¾	32.4	Pb	Str	Vac	Eis	Br-L 60	C	7	Tim 66700 D	Wo	83.1	R	R	162½	7850	36x5	36x12 S
Indiana 638	4	4955	Wis H	6	4 x5	38.4	Pb	Str	Vac	Eis	Br-L 60	C	7	Tim 66700 D	Wo	83.1	R	R	168½	8100	36x5	36x12 S
Indiana 41	5	5460	Her G	4	4¾x5¾	36.1	Pb	Str	Vac	Eis	Br-L 69	C	7	Tim 68700 D	Wo	95.0	R	R	172	9600	36x6	40x12 S
Int. Harvester Sp. Del.	¾	720	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	Rem	Mec	U	3	Eat 502 R	Sp	15.1	4	4	124	2200	30x5.25	30x5.25
Int. Harv. 6 Spd. Spec.	1	820	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	Rem	Mec	U	3	Eat 1124	Sp	*52.6	4	4	124	2430	30x5	30x5
Int. Harvester S-24	1¼	1160	Lyc C T	4	3¾ x5	22.5	Pw	Zen	Vac	Rem	Own	U	3	Eat 1002	Sp	21.3	4	4	130	3200	30x5	30x5
Int. Harvester S-26	1¼	1310	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	Rem	Own	U	3	Eat 1002	Sp	21.3	4	4	130	3250	30x5	30x5
Int. Harvester SF-34	1½	1450	Lyc C T	4	3¾ x5	22.5	Pw	Zen	Vac	Rem	Own	U	3	Eat 1502	Sp	22.6	4	4	140	3520	30x5	32x6
Int. Harvester SF-36	1½	1600	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	Rem	Own	U	3	Eat 1502	Sp	22.6	4	4	140	3570	30x5	32x6
Int. Harvester SD-44	2	1590	Lyc C T	4	3¾ x5	22.5	Pw	Zen	Vac	A B	Own	U	4	Eat 2002	Sp	40.6	4	4	117	3700	30x5	32x6
Int. Harvester SD-46	2	1740	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	A B	Own	U	4	Eat 2002	Sp	40.6	4	4	117	3750	30x5	32x6
Int. Harvester SF-46	2	1950	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	Rem	Own	U	4	Eat 2002	Sp	40.6	4	4	140	4000	32x6	32x6 D
Int. Harvester 54-C	2½	3200	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Own A M 428	Ch	51.8	R	D	140	6400	36x5	36x10
Int. Harvester 54	2½	3550	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Eat 54 65000	D R	53.7	R	D	140	6345	36x5	36x8
Int. Harvester 74-C	3½	4550	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Own A M 427	Ch	*86.0	R	D	154	8715	36x6	40x12
Int. Harvester 74	3½	4550	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Eat 74 1000	D R	61.6	R	D	160	8175	36x6	40x12
Int. Harvester 104-C	5	4800	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Own A M 427	Ch	86.0	R	D	154	8890	36x6	40x14
Int. Harvester HS-54	2½	3850	H-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	R B	Own	U	5	Eat 54 65000	D R	60.5	4	4	*148	8000	36x5	36x12 S
Int. Harvester HS-54-C	2½	3850	H-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	R B	Own	U	5	Own A M 428	Ch	63.8	4	4	*148	8665	34x5 S	36x12 S
Int. Harvester HS-74	3½	4850	H-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	R B	Own	U	5	Eat 74 1000	D R	70.5	4	4	*160	10700	34x5 S	36x7 D
Int. Harvester HS-74-C	3½	4850	H-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	R B	Own	U	5	Own A M 427	Ch	79.1	4	4	*160	11000	34x6 S	36x7 D
Int. Harv's'r NS-104-C	5	5500	H-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	R B	Own	U	5	Own A M 427	Ch	90.5	4	4	*160	11095	34x6	36x8 D
Int. Harvester A-5	3	2550	Own	6	3⅜x4½	31.54	Pb	Zen	Vac	Rem	Own	U	5	Own	Sp	—	4	4	156	—	34x7	34x7 D
*Larrabee 20	1	1595	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Gra	Rem	Br-L	U	3	Col	Sp	4.15	4	D	142	4170	30x5	30x5
*Larrabee 30	1½	1875	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Gra	Rem	Br-L	U	3	Col	Sp	4.15	4	D	161	4550	32x6	32x6
*Larrabee 40	2	2965	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	Gra	Rem	Br-L	U	4	Wis	D R	5.35	4	D	176	5950	32x6	32x6 D
*Larrabee 50	2½	3285	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	Gra	Rem	Br-L	U	4	Wis	D R	5.35	4	D	183	6030	32x6	32x6 D
*Larrabee 60	3	3980	Con 18 R	6	4 x4½	38.4	Pb	Zen	Gra	Rem	Br-L	U	4	Tim	Wo	5.35	4	D	195	7140	34x7	34x7 D
*Larrabee 70	3½	4600	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	Gra	Rem	Br-L	C	7	Tim	Wo	9.5	4	D	205	7740	34x7	34x7 D
Larrabee 80	5	5200	Con 21 R	6	4⅜x4¾	—	Pb	Zen	Gra	Rem	Br-L	C	7	Tim	Wo	—	4	D	205	9150	36x8	36x8 D
Mack BB	1½	3500	Own	4	4¼x5	28.9	P&S	Str	Vac	N E	Own	U	4	Own	Hyp	Opt	4	D	165½	—	32x6	32x6 D
Mack BG	1½	3000	Own	6	3⅝x5½	—	—	—	—	—	—	—	—	—	—	—	—	—	138–168	—	—	—
Mack AB	1½-2	3100	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	Ch	Opt	R	D	2-Opt	—	36x4 S	36x7 S
††Mack AB	2½-3	3950	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	D R	Opt	R	D	2-Opt	—	36x4 S	36x8 S
Mack BJ	3-4	5800	Own	6	4½x5½	48.6	P&S	Str	Vac	N E	Own	C	4	Own	D R	Opt	4	D	3-Opt	—	36x8	36x8 D
††Mack AK	3-4	5800	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	4	Js	3-Opt	—	36x5 S	36x5 D S
Mack AK	3½-5	5250	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	C	4	Own	D R	Opt	4	D	3-Opt	—	36x5 S	36x5 D S
††Mack AC	3½-5	4950	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	Js	R	3-Opt	—	36x5 S	40x10 S
Mack AC	5½-7	5500	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	Js	R	3-Opt	—	36x6 S	40x12 S
Mack AC	7½	6000	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	Js	R	3-Opt	—	36x7 S	40x14 S
††Mack AP	7½	9500	Own	6	5 x6	60.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	R	Js	191	—	36x7 S	40x8 D S
Mack AC 6-wheel	10	7500	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	4 R	Js	2-Opt	—	36x7 S	40x12 S
Mack AP 6-wheel	10	12000	Own	6	5 x6	60.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch	Opt	4 R	Js	2-Opt	—	36x7	40x12 S
Moreland A-6	*6800	1275	Con 34 L	6	2⅞x4¾	19.84	P	Zen	Vac	Aut	Br-L 20	U	4	Tim 52000 H	Sp	24.17	4	D	134	3000	32x6.75	32x6.75
Moreland R R-6	*9300	1850	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	P	Aut	Br-L 35	U	4	Tim 54000 H	Sp	32.95	4	D	158½	4000	32x6	32x6
Moreland B-6	*12000	2200	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	P	Aut	Br-L 35	U	4	Tim 63721 H	Wo	34.8	4	D	158½	4500	34x7	34x7
Moreland E-6	*15000	3600	Her W X C	6	4 x4½	38.4	Pb	Zen	P	Aut	Br-L 51	U	4	Tim 65000 H	Wo	34.8	*4	D	182	6000	34x7	34x7 D
Moreland Ex. 6	*19000	3750	Her W X C	6	4 x4½	38.4	Pb	Zen	P	Aut	Br-L 51	U	4	Tim 65704 N	Wo	46.0	*4	D	182	6500	36x4 S	36x8 S
Moreland H-6	*22000	4650	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Br-L 55	C	7	Tim 66702 W	Wo	82.3	*R	D	196	8000	36x5 S	36x10 S
*Moreland B D W-6	*15000	3200	Her W X B	6	3¾x4	33.7	Pb	Zen	P	Aut	Br-L 35	U	4	Own	Wo	41	4	D	160	5800	34x7	34x7
*Moreland E D-6	*23000	4900	Her W X C	6	4 x4½	38.4	Pb	Zen	P	Aut	Br-L 51	U	5	Own	Wo	52.2	*4	D	196	8500	36x8	36x8
*Moreland H D S-6	*30000	5850	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Br-L 60	C	7	Own	Wo	81.6	*4	D	220	10500	36x6 S	36x8
*Moreland S D-6	*34000	6450	Her Y X C 2	6	4½x4¾	48.6	Pb	Zen	P	Aut	Br-L 60	C	7	Own	Wo	89.0	*4	D	221	11500	36x7 S	36x10 S
*Moreland T D-6	*34000	8000	Con 15 H	6	4½x5¾	48.6	Pw	Str	P	Aut	Br-L 70	C	7	Own	Wo	98.5	*4	D	221	12500	36x7 S	36x10 S
Paige	¾	860	Own	6	3¼x4½	25.35	Pb	Det	P	Del	W-G	U	3	Sal	Sp	17.36	4	Tr	115	2465	B 5.50x19	B 5.50x19
*Fleet Arrow F A-1	1½-2	2450	Own F A	6	3½x5	29.5	Pb	Str	A P	Rem	Own	U	3	Own	Sp	33.3	4	Tr	140	3950	32x6.00	34x7
*Pierce-Arrow F A-1	1½-2	2450	Own	6	3½x5	29.4	Pw	Str	P F	Del	Own	U	3	Tim	St	21.4	4	Tr	140	4100	32x6	32x6 D
*Pierce-Arrow X A-1	2	3500	Own	4	4 x5½	25.6	Pw	Str	Pre	Del	Own	C	4	Own	Wo	44.2	D	R	150	6750	36x4	36x5 D S
*Pierce-Arrow X B-1	3	3750	Own	4	4 x5½	25.6	Pw	Str	Pre	Del	Own	C	4	Own	Wo	48.1	D	R	150	6830	36x5	36x5 D S
*Pierce-Arrow H B-1	5	4500	Own	4	4 x5½	25.6	Pw	Str	Pre	Del	Own	C	7	Own	Wo	95.0	D	R	156	8400	36x5	36x6 D S
*†Pierce-Arrow W C-1	4	5100	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	41.5	D	R	162	8780	36x5	36x6 D S
*†Pierce-Arrow R D-1	5	5400	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	40.5	D	R	162	9440	36x6	36x7 D S
*†Pierce-Arrow R F-1	7½	5600	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	51.9	D	R	168	10320	36x6	40x8 D S
†Pierce-Arrow R F-T	7½	5600	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	51.9	D	R	132	940	36x6	36x8 D S
Relay 20 B	1	1700	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	25.7	4	D	142	4100	B 30x5	B 30x5
Relay S 11 B	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	30.0	4	D	162	4500	B 30x5	D B 30x5
Relay 30 A	1½	2990	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	34.5	4	D	168	5300	B 34x5	D B 34x5
Relay 40 A	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	34.5	4	D	168	5500	B 36x6	D B 36x6

Major Specifications and Mechanical Details of 1930 Commercial Cars Built in the United States

Make and Model	Capacity—Tons	Chassis price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gearset	Location	No. Spds. for.	Rear Axle	Final Drive	Reduction in Low	Brakes, foot	Brakes, hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Relay 50 C	2½	4415	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Own	Relay	58.5	4	D	175	7300	B 36x6	S 36x10
Relay 60 C	3	4480	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Own	Relay	58.5	4	D	175	7450	B 36x6	S 36x12
Relay 70 C	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Cov	C	8	Own	Relay	84.2	R	D	175	8600	B 36x6	S 40x12
Relay 80 C	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Cov	C	8	Own	Relay	84.2	R	D	175	8800	B 36x6	S 40x14
Reo B A	½	895	Con 16 E	6	3⅜x4	27.3	Pb	Sch	Vac	Rem	W-G	U	3	Sal	Sp	14.63	4	Tr	115	2290	28x5.25	28x5.25
Reo B A	1	995	Con 16 E	6	3⅜x4	27.3	Pb	Sch	Vac	Rem	W-G	U	3	Own	Sp	18.4	4	Tr	123	2755	30x5	30x5
Reo [illegible]	[illegible]	[illegible]	[illegible]	6	3⅜x4	27.3	Pb	Sch	Vac	Rem	W-G	U	3	Own	Sp	18.4	4	Tr	138	2850	30x5	30x5
Reo [illegible]	[illegible]	1995	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	22.96	4	Tr	137	3525	32x6	32x6
[illegible]	[illegible]	[illegible]	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	22.96	4	Tr	152	3700	32x6	32x6
Reo F F	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	22.96	4	Tr	156	3750	32x6	32x6
Reo F H	2	1545	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	37.6	4	Tr	142	4165	32x6	32x6 D
Reo F C	2	1595	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	37.62	4	Tr	152	4025	32x6	32x6 D
Reo F D	2	1695	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	37.62	4	Tr	168	4075	32x6	32x6 D
Reo G A	3	2035	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	41.05	4	Tr	163	4625	32x6	32x6 D
Reo G C	3	2140	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	41.05	4	Tr	179	4850	32x6	32x6 D
[illegible]	[illegible]	[illegible]	[illegible]	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	46.2	4	Tr	134	4570	32x6	32x6 D
[illegible]	[illegible]	[illegible]	[illegible]	6	3¼x4½	—	Pb	Zen	Vac	Aut	Br-L	U	4	Cla	Sp	28.3	4	Tr	144	3300	6.00x20 B	32x6
Republic I-1	*12000	2195	Lyc	6	3¼x4½	—	Pb	Zen	Vac	Aut	Ful	U	4	Eat	Sp	43.0	4	D	155	4850	32x6	32x6 D
Republic H-1	*15000	2985	Lyc	6	3⅞x5	—	Pb	Zen	Vac	Aut	Ful	U	4	Eat	Sp	38.0	4	D	163	5750	34x7	34x7 D
Republic L-1	*18000	3595	Lyc	6	3⅞x5	—	Pb	Zen	Vac	Aut	Ful	U	4	Eat	D R	48.0	4	D	180	6900	36x8	36x8 D
Republic M-1	*20000	3800	Waukesha	6	4 x4¾	—	Pb	Zen	Vac	Aut	Br-L	U	5	Eat	D R	53.0	D	R	171	6900	36x8	36x8 D
Rugby Model 401	1	*775	Con	4	3⅜x4¼	18.2	Pb	Til	Vac	Aut	Own	C	3	Own	Sp	14.79	4	4	107	2325f	28x4.75	28x4.75
Service [illegible]	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	B 30x5	B 30x5
Service S H Y	1½	1990	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	B 30x5	D B 30x5
Service 40 Z	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	B 36x6	D B 36x6
Service 60 Z	3	4480	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7100	S 36x5	S 36x12
[illegible]	[illegible]	[illegible]	[illegible]	8	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8400	S 36x6	S 36x14
[illegible]	[illegible]	[illegible]	[illegible]	4	3⅜x4½	—	Pb	Str	Vac	Del-R	Clark	U	4	Sal	Sp	6.6	4	D	130	——	6.50x20	6.50x20
Stewart 30 X	1	795	Lyc	6	2⅞x4½	—	Pb	Str	Vac	Del-R	Clark	U	4	Sal	Sp	6.6	4	D	130	——	6.50x20	6.50x20
***Stewart 16**	1¼	1295	Lyc C T	4	3⅜x5	22.5	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	24.0	4	D	130	3326	32x6	32x6
***Stewart 16 X**	1¼	1295	Lyc 4 S L	6	3¼x4½	25.3	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	24.0	4	D	130	3326	32x6	32x6
Stewart 28 X	1½	1495	Lyc 4 S L	6	3¼x4½	25.3	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	27.3	4	D	136	3840	30x5	30x5 D
Stewart 29 X	2	1695	Lyc 4 S L	6	3¼x4½	25.3	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	27.3	4	D	145	4188	32x6	32x6 D
Stewart 26 X W	2	2290	Lyc T	6	3⅝x5	31.5	Pw	Str	Vac	Rem	Ful	U	4	Tim	Wo	29.0	4	D	165	5095	32x6	32x6 D
***Stewart 18 X**	2½	2690	Lyc T	6	3⅝x5	31.5	Pw	Str	Vac	Rem	Ful	U	4	Tim	Wo	29.0	4	D	165	5788	32x6	32x6 D
Stewart 32 X	2½	1990	Lyc	6	3⅝x4¾	31.54	Pw	Str	Vac	Rem	Ful	U	4	Cla	Sp	7.25:1	4	D	165	——	32x6	32x6 D
Stewart 33 X	3	3290	Lyc	6	3⅞x5	36.2	Pw	Str	Vac	Rem	Ful	U	4	Tim	Wo	7.25:1	4	D	165	——	34x7	34x7 D
Stewart 19 X	3½	3690	Lyc F	6	3⅞x5	36.2	Pw	Str	Vac	Rem	Ful	C	12	Tim	Wo	105.1	4	D	165	6990	36x5	36x10
Stewart 31 X	5	4990	Waukesha	6	4⅜x5⅛	45.9	Pw	Str	Vac	Rem	Ful	C	8	Tim	Wo	10.5:1	4	D	165	——	36x6 S	36x6 S D
[illegible]	[illegible]	[illegible]	[illegible]	6	4¾x5¼	45.99	Pw	Str	Vac	Rem	Ful	U	8	Tim	Wo	93.81	4	D	165	9700	36x7	40x7 D
[illegible]	[illegible]	[illegible]	[illegible]	6	3⅜x4⅛	27.3	P C	Str	P	Rem	Own	U	3	Own	Sp	14.3	4	4	115	——	19x6.00	19x6.00
Studebaker GN-S	1	1045	Own	6	3⅜x4⅛	27.3	P C	Str	P	Rem	Own	U	3	Own	Sp	13.8	4	Js	130	——	20x6.00	30x5
Studebaker GK-N	1	1095	Own	6	3⅜x4⅝	27.3	P C	Str	P	Rem	Own	U	3	Own	Sp	13.7	4	Js	146	2830	30x5	30x5
Studebaker GN-N	1¼	1245	Own	6	3⅜x4½	27.3	P C	Str	P	Rem	Clark	U	4	Clark	Sp	33.5	4	Js	146	——	30x5	32x6
Studebaker 77	2½	2765	Own	8	3½x4⅜	39.2	P C	Str	P	Rem	Ful	U	3	Eat	Sp	19.8	4	Js	158	4745	20x6.75 B	20x6.75 B
Studebaker 88	3	3165	Own	8	3½x4⅜	39.2	P C	Str	P	Rem	Ful	U	3	Eat	Sp	19.8	4	Js	184	4920	20x7.50 B	20x7.50
Studebaker 99	3½	3665	Own	8	3½x4⅜	39.2	P C	Str	P	Rem	Ful	U	4	Eat	Dr	24.6	4	Js	184	5400	20x7.50 B	20x7.50
Victor 35	1½	1895	Con	6	3⅜x4	27.3	Pb	Zen	Vac	Rem	Cov	U	3	Tim	Sp	—	4	D	144	3200	30x5	30x5 D
Victor 45	2½	2495	Her	6	3¾x4½	33.7	Pb	Zen	Vac	Rem	Ful	U	4	Wis	D R	—	4	D	148	4500	32x6	32x6 D
Victor 75	3½	3895	Her	6	4 x4½	38.4	Pb	Zen	Vac	Rem	Ful	U	4	Wis	D R	—	4	D	162	6000	34x7	34x7 D
Whippet 96 A	½	380	Own 96 A	4	3⅛x4¾	15.6	Pb	Til	Vac	Aut	Own	U	3	Own	Sp	14.75	4	R	103¼	1659	28x4.75	28x4.75
Whippet [illegible]	[illegible]	645	Own 98 A	6	3¼x3¾	23.4	Pb	Til	Vac	Aut	Ful	U	4	Cla-B 364	Sp	33.5	4	R	131	2540	30x5	30x5
[illegible]	[illegible]	[illegible]	Own G R A	4	3¾x5⅛	22.5	C S	Zen	Vac	L-N	Own	C	4	Own	Sp	18.6	R	R	133½	3242	30x5	30x5
†White 57	1¼	2725	Own G R C	4	4 x5¾	25.6	Pw	Zen	Vac	L-N	Own	U	4	Own	Sp	19.3	R	R	146	3755	32x6	32x6
†White 20 A	1½	2125	Own G K A	4	3¾x5⅛	22.5	C S	Zen	Vac	L-N	Own	C	4	Own	D R	32.1	R	R	145½	4412	34x5	34x5 D P
†White 56	2	3125	Own G R C	4	4 x5¾	25.6	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	26.2	R	D	165	5096	36x4 S	36x7 S
†White 51 A	2½	3750	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	35.5	R	D	170	6256	36x5 S	36x8 S
†White 55	3½	4650	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	I G	66.1	D	R	174	8402	36x5 S	40x5 S D
†White 52 T	3½	4700	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	I G	76.5	D	R	129½	8126	36x5 S	40x5 S D
†White 52	5	5100	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	5	Own	I G	92.3	D	R	174	9184	36x6 S	40x12 S
†White 58	3	4400	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	I G	49.5	D	A	180	7400	36x5 S	36x5 S D
†White 60	1	1850	Own 2 A	6	3½x4½	29.4	Pw	Zen	Vac	Rem	Own	U	3	Own	Sp	17.9	4	D	138	3562	30x5	30x5
†White 61	1½	2450	Own 2 A	6	3½x4½	29.4	Pw	Zen	Vac	Rem	Own	U	4	Own	Sp	23.4	4	D	148	4612	30x5	30x5 D
Willys-Knight 15	1½	1545	Own K G T	6	2⅛x4⅜	20.7	Pb	Til	Vac	Aut	Ful D U	U	3	Eat 1002	Sp	24.3	4	R	134	3300	30x5	32x6
Willys-Knight 16	1½	1595	Own K G T	6	2⅛x4⅜	20.7	Pb	Til	Vac	Aut	Ful D U	U	3	Eat 1002	Sp	24.3	4	R	151	3400	30x5	32x6
Willys-Knight 20	2	1945	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful D U	U	3	Eat 1504	Sp	28.4	4	R	150	3800	32x6	34x7
Willys-Knight 21	2	1995	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful D U	U	3	Eat 1504	Sp	28.4	4	R	164	3900	32x6	34x7
Willys-Knight 25	2½	2545	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful G U	U	4	Wis 6617 B	D R	30.3	4	R	150	4920	32x6	32x6 D
Willys-Knight 26	2½	2595	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful G U	U	4	Wis 6617 B	D R	30.3	4	R	164	5020	32x6	32x6 D

GENERAL NOTATIONS

***†REFERENCE MARKS** apply to individual lines only and explanations are given under the subdivision for each company in the **"SPECIAL NOTATIONS."**

CAPACITIES given in this table are in tons or fractions of tons. *Shows maximum allowable gross weight.

TIRE EQUIPMENT where not otherwise indicated is solid.

WHEEL BASES given are standard, but optional wheel bases are available in many cases.

ENGINE—Bud, Buda; Con, Continental; Her, Hercules; Kgt, Knight; Lyc, Lycoming; Wak, Waukesha; Wis, Wisconsin.

LUBRICATION—Pb, pressure lubrication to main and connecting rod bearings; Pw, full pressure lubrication to all bearings, including wrist-pins; P&S, pressure with splash, CS, circulating splash; Sp, Splash.

CARBURETOR—Car, Carter; Hol, Holley; Joh, Johnson; Mar, Marvel; Sch, Wheeler-Schebler; Str, Stromberg; Stw, Detroit lubricator; Til, Tillotson; Zen, Zenith-Detroit.

FUEL FEED—Gra, Gravity; Pre, Pressure; Vac, Vacuum tank; P, Fuel pump; Auto-P, Auto pulse; E, Electric pump.

IGNITION—AB, American-Bosch; Aut, Electric Auto-Lite; Apo, Apollo; Del, Dayton Engine Laboratory; Eis, Eisemann; L-N, Leece-Neville; N-E, North East; RB, Robert Bosch; Rem, Delco-Remy; Spf, Splitdorf.

TRANSMISSION—Br. L, Brown-Lipe; Cov, Covert; Ful, Fuller; Mec, Mechanics Machine; Mun, Muncie; W-G, Warner Gear.

LOCATION—C Center, Amid; U, in unit with engine; J, Jack shaft.

REAR AXLE—Cla, Clark Equipment; Col, Columbia; Eat, Eaton; Sal, Salisbury; Tim, Timken; Wis, Wisconsin.

FINAL DRIVE—St, Straight bevel; Sp, Spiral bevel; Wo, Worm; DR, Double Reduction; Ch, Chain; IG, Internal Gear.

BRAKES—Js, Jack shaft; R, Rear wheels; D, Drive shaft; 4, four-wheel; Tr, Transmission; W, Westinghouse air brake.

TIRES—B, Balloon; D, Dual; S, Solid.

SPECIAL NOTATIONS

AMERICAN-LA FRANCE

*Chief model also available as 2½-ton model, 34x7 tire, dual rear, weight 6,400. Price $3,900.

AUTOCAR

†Engines in these models are located under the driver's seat.

DURANT LINE

*Price includes panel body.

GENERAL MOTORS TRUCK LINE

*Capacity given in all cases is maximum allowable total gross weight (straight rating), and includes chassis, cab, equipment, body and load.

Model T-19 is also available in three other types, with 145¾-inch wheel base having same straight ratings and standard tire combinations as listed for the 127¾-inch wheel base types shown in the table.

Model T-25 is also available in three other types, with 140-inch wheelbase having same straight rating and standard tire combinations and in two other types on the 127¾-inch wheelbase.

Model T-30 is also available in six other types, with 152 and 164 inch wheel bases, respectively, having same straight ratings and standard tire combinations as listed for the 136-inch wheel base types shown in the table.

Model T-42 is also available in nine other types, with 152, 164 and 175 inch wheel bases respectively, having same straight ratings and standard tire combinations as listed for the 136-inch wheel base types shown in the table.

Model T-60 is also available in nine other types, with 160, 180 and 200 inch wheel bases, respectively, having same straight ratings, and standard tire combinations as listed for the 140-inch wheel base types shown in the table.

Model T-60 Special is also available in six other types with 160¾, 180¾ and 200¾ inch wheel bases, respectively, having same straight ratings and standard tire combinations as listed for the 140¾-inch wheel base types shown in the table.

Optional rear axle gear ratios are available for all types and optional tire equipment is available for all types except Model T-11-1001.

FLEET-ARROW LINE

*Model F. A. 1 is also available as Model F. A. 2, at $2,500 on wheel base of 160 inches, weight 3,975 lbs., and as Model F. A. 3, at $2,550, with seven speed transmission on 180-inch wheel base, weight, 3,985 lbs.

GOTFREDSON LINE

*Six-wheeler.

GRAMM

*Models B, C, D and E are furnished in three wheel base lengths—others on request.

*Model T Series—Larger engines, pneumatic tires and special wheel bases, and 8 speed transmissions—optional at extra cost.

Model "GY"—190 and 210 in. wheel bases.
Model "HY"—210 and 236 in. wheel bases.
*Model "HY"—210 and 236 in. wheel bases. Tire sizes and electrical equipment optional, depending upon type of service—Coach or Van.

*Above models are all built in tractor wheel base lengths for semi-trailer use.

INTERNATIONAL HARVESTER LINE

*Model HS-54 also available in the following wheel bases, 130-inch tractor, 170, 185 and 200-inch.

*Model HS-54-C also available in the following wheel bases, 130-inch tractor, 170, 185 and 200-inch.

†Frame is reinforced with inserted channels in each side rail, extending from dash to rear end.

*Model HS-74 also available in the following wheel bases, 144-inch tractor, 185, 210 and 235-inch.

*Models HS-74-C and HS-104-C also available in the following wheel bases, 146-inch tractor, 185, 210 and 235-inch.

All Model HS heavy-duty International truck models are equipped with built-in vibration dampered clutches.

LARRABEE

*Note—Bevel gear, worm or double reduction drive rear axle available in models 40 and 50. Bevel or double reduction axles available in 30. Worm axles in 60, 70 and 80. Three or more wheel bases in each model. All Larrabee models have hydraulic brakes; 40 up have vacuum booster.

MACK LINE

Other wheel bases furnished on all truck models.

On 6-wheel jobs, 4 rear wheels driven by chains, foot brake on 4 rear wheels.

Hyp.—Hypoid drive, single reduction.

††Made also in tractor models.

MORELAND LINE

*Indicates six-wheel type vehicles.

PIERCE-ARROW LINE

*Model FA1 also available as Model FA2, at $2,550 on 160-inch wheel base, weight 4,150 lbs., and also as Model FA3, at $2,250 on 180-inch wheel base, weight 4,200 lbs.

*Model XA1 also available as Model XA2, at $3,550 on 162-inch wheel base, weight 6,800 lbs.

*Model XB1 is also available as Model XB2, at $3,800 on 180-inch wheel base, weight 6,900 lbs.

*Model HB1 is also available as Model HB2, at $4,550 on 180-inch wheel base, weight 8,500 lbs., and also as Model HB3, at $4,600 on 198-inch wheel base, weight 8,700 lbs.

*Model WC1 is also available as Model WC2, at $5,150 on 180-inch wheel base, weight 8,950 lbs., and also as Model WC3, at $5,250 on 198-inch wheel base weight 9,050 lbs.

*Model RD1 is also available as Model RD2, at $5,450 on 180-inch wheel base, weight 9,650 lbs., and also as Model RD3, at $5,500 on 198-inch wheel base, weight 9,750 lbs.

*Model RF1 is also available as Model RF2, at $5,650 on 204-inch wheel base, weight 10,500 lbs.

†Seven-speed transmission also available.

REPUBLIC LINE

*Model 75-4 also available as Model 75-6, priced $1,495, on 128-inch wheel base, with Lycoming 4SL engine, 6-cyl. 3¼ by 4½ inches, rated 25.3 h.p., weight 3,150 lbs.

*Model 76-4, also available as Model 76-6, priced $1,675, on 150-inch wheel base, with Lycoming 4SL engine, as in Model 75-6, weight 3,500 lbs.

†Model 60-61, also available with four-wheel brakes, $3,155.

**Model 62, same as 60-61, on 171-inch wheel base, $3,040.

†Model 25W-25WRB available with four-wheel brakes

**Model 66, same as 65, on 200-inch wheel base, $3,750.

**Model 25W, 25WB and 25WBR also available in 3½-ton capacities as Models S25W, S25WB and S25WRB on wheel bases of 165, 156 and 124 inches, priced $3,695.

**Models 35 and 35B also available in 5-ton capacities on wheel bases of 170 and 157 inches, priced $5,145.

**Model 85 also available as Model 86 on 170-inch wheel base, price $2,150.

**Model 50-51 also available as Model 52 on 170-inch wheel base.

REO LINE

*Tonner in wheel base, 123, 138; 1½-ton in wheel base, 137, 156, 152; 2-ton in wheel base, 152, 168; 3-ton in wheel base, 168, 179, 184.

RUGBY

F—Chassis weight includes body.

STEWART LINE

Model 30 can also be supplied in 120 and 140-inch wheel base.

*Models 16 and 16X can be supplied in 145-inch and 160-inch wheel base.

Model 28X can be supplied in 146, 160 and 176-inch wheel base.

Model 29X can be supplied in 160 and 176-inch wheel base.

*Model 26XW can be supplied in 148, 176 and 190 inch wheel base.

*Model 18X, 32X and 33X can be supplied in 148, 190 and 220-inch wheel base.

*Models 19X, 31X and 27X can be supplied in 148, 172, 190, 220 and 235-inch wheel base

WHITE LINE

*Bus Model 52 is equipped with Booster Brakes and 50B and 54 with air brakes. Model 58 with air brakes as optional equipment.

Model 60 gross weight capacity, with 32x6 tires, 8,000 lbs; 34x7.50 balloon tires optional at extra cost.

†Supplied in optional wheel bases.

FORD LINE

*Low speed axle 22.6 to 1.

KELLAR JOINS AUTOCAR

Chicago, Feb. 20.—Announcement is made by Autocar Sales and Service, 1716 West Pershing Road, distributor of Autocar trucks, that L. M. Kellar, who has been with the Chicago branch of the Mack Truck Company for eight years, has joined its organization as manager of the used and reconditioned truck department.

Range of Automotive Stocks: Financial News

WEDNESDAY, FEBRUARY 19

NEW YORK STOCK EXCHANGE

Previous 1929-1930 High	Low	Div.		Sales	High	Low	Close	Net Change
104⅞	7	....	Advance Rumely ...	1,100	17½	16⅞	16⅞	— ½
119	15	....	do pf.	No sales today				
223⅜	77	3	Air Reduction	4,600	133⅞	130½	130½	— 2⅜
11¼	1	....	Ajax Rubber	700	2⅛	2	2⅛	+ ⅛
75½	35⅛	3	Allis Chalmers	8,200	60⅜	58⅝	58⅝	— 1⅜
76½	27	....	Am. Bosch Magneto	400	50½	50	50	— 1⅞
95⅛	70¼	7	Amer. Chain pf.	500	93	92	93	+ 1¾
8⅞	2	....	Am.-La France	100	2¾	2¾	2¾	....
514	120	*4	Auburn	1,300	230	225	225	— 5¼
104¾	25	2	Bendix Aviation	4,700	40⅞	39⅛	39⅛	— 1¼
136¾	37	3	Bohn Aluminum	400	53¾	53	53	— ½
86⅞	26	4	Borg-Warner	700	40⅜	39⅝	40	— ⅛
63⅛	8½	....	Briggs Mfg. Co.	2,200	16	15⅝	15¾	— ⅛
43½	17⅜	2	Briggs & Stratton ..	200	29	28¼	29	....
73¾	13	....	Brockway Motor	No sales today				
22⅞	8⅛	1	E. G. Budd Mfg.	100	11½	11½	11½	— ⅛
14⅝	7¾	1	Budd Wheel	4,700	13⅛	12⅝	13	— ¼
54¾	25	1.60	Bullard	2,100	44⅛	43½	43½	+ ½
68⅝	50¼	*3	Caterpillar Tractor..	1,700	67⅞	66½	66½	— ¾
90¾	18	4.20	Checker Cab	5,100	47⅜	44⅝	46	— ½
47½	21⅞	....	Chicago Pneu. Tool.	200	29⅜	29	29	....
36	21⅞	3	Chicago Yellow Cab.	100	28½	27⅞	28½	+ ¾
135	26	3	Chrysler Corp.	17,400	38¼	37¼	37½	— ⅝
61⅞	25	3	Clark Equipment ...	200	37½	37½	37½	....
62⅝	18	2	Commercial Credit..	25,800	34⅝	31⅞	34⅝	+ 2⅛
105¾	70	6.50	do 6½s pf.	100	89	86	89	+ 2
48	36⅛	1.60	Comm'l Invest Trust	6,300	49⅞	46¾	49½	+ 2¾
99	87	6.50	do 6½s pf.	No sales today				
6⅞	5⅝	....	Continental Motors.	21,500	8¼	6⅝	7⅞	+ 1¼
77⅞	64	3.50	Cutler-Hammer	300	74	74	74	....
131	112⅛	4.70	Du Pont	5,700	130	126⅛	126⅞	— ⅝
36⅞	27⅞	3	Eaton Axle & Spring	1,000	35⅜	34⅝	34⅝	+ ½
105	81	6	Electric Auto-Lite...	8,700	103	100	100⅛	— 1¾
79¼	69¾	5	Electric Stor. Battery	500	74¾	74	74¾	— ¼
7⅝	3⅜	....	Emerson Brant	No sales today				
30¾	18½	2.50	Evans Auto Load ...	3,200	30	28¼	28⅞	— 1⅛
12¾	7⅜	.80	Federal Motors	100	11	11	11	— ½
33⅛	28	1.60	Firestone T. & R. ...	1,500	27¼	26⅞	27	— ¾
86⅜	80⅛	6	do pf.	1,000	81⅞	81⅜	81⅞	....
4¼	3	....	Fisk Rubber	1,500	3⅞	3¾	3⅞	....
72½	8	....	do 1st pf.	No sales today				
9¼	5⅜	....	Gabriel Snubber	200	8¼	8¼	8¼	+ ¼
78¾	60⅛	1.60	General Electric	65,700	75⅜	73⅞	73⅞	— 1⅝
7¾	3½	....	Gardner Motor	1,500	7	6	6	— 1¼
45	37½	3.30	General Motors	27,600	43⅜	42⅜	42½	— ¾
123	117½	7	do 7s pf.	800	122	122	122	....
36⅞	31	2	Glidden Co.	1,800	35⅞	34⅝	35⅞	+ ⅝
106⅛	95	7	do pf.	No sales today				
51¾	40¼	4	Goodrich	2,900	49¾	47	48¼	+ ⅝
115⅛	95½	7	do pf.	No sales today				
85⅜	62	5	Goodyear T. & R. ..	9,400	85	81⅞	82⅞	+ 1⅛
99½	90	7	do pf	500	100¼	99¾	99¾	— ¼
11¼	9⅛	....	Graham-Paige Motor	2,000	10⅝	10¼	10½	+ ¼
9¼	6⅜	....	Hayes Body	700	7⅜	7¼	7⅜	+ ⅛
52¾	13	2	Houdaille-Hershey ..	6,000	25½	24¼	24⅞	— 1⅛
62⅞	53⅝	5	Hudson Motor Car ..	4,900	58⅛	55⅞	56	— 2⅜
24¾	20¼	2	Hupp Motor Car	600	22¾	22½	22½	— ⅛
10⅝	5	....	Indian Motocycle ...	5,200	9⅞	9	9½	....
5½	5¼	....	Intercon. Rubber ...	900	6⅜	5⅞	6⅛	+ 1⅛
95⅞	78⅜	2.50	Interna. Harvester..	6,200	95¼	91⅝	92⅜	— 1⅞
145	137	7	do pf.	No sales today				
148¾	117	3	Johns-Manville	8,700	139⅞	135¾	136½	— 2
4½	2	....	Jordan Motor Car ..	4,200	4¼	3⅞	3⅞	— ⅛
5¾	3¼	....	Kelley-Springfield ..	600	5⅛	4⅞	4⅞	....
55	29	....	do 6s pf.	No sales today				
42	20½	....	do 8s pf.	No sales today				
31¾	22⅛	2	Kelsey-Hayes Wheel	1,100	29⅛	28½	28½	— ¾
25	5	....	Lee Rubber & Tire..	No sales today				
45⅛	39	2.60	Link Belt	100	45	45	45	....
84⅞	70	6	Mack Trucks	1,400	81	79⅜	79⅞	— 1¼
47½	39⅞	4.50	Marlin Rockwell ...	100	47	45⅛	45⅛	— ⅝
27¾	20⅜	2	Marmon	100	24⅛	23½	23½	— ¼
4	3	....	Martin Parry	No sales today				
21	15⅛	2	Mengel	18,000	21⅝	20	20¼	— ¾
4¾	3⅞	....	Miller Rubber	400	4⅜	4¼	4¼	....
11⅜	3¾	....	Moon Motors	19,900	11½	10¼	11⅜	+ 1
7⅝	4⅛	....	Moto Meter G. & E.	2,500	6½	6⅜	6⅜	— ⅛
142	36	2	Motor Products	No sales today				
31¾	26½	3	Motor Wheel Corp...	700	32	31⅜	31⅜	— ⅛
20¾	12⅞	....	Mullins Mfg.	200	19	18⅞	18⅞	— ½
24¼	18	2	Murray Corp.	2,500	21½	21⅛	21½	+ ¼
58½	51⅛	6	Nash Motors	2,400	52⅜	51½	52	....
11⅛	⅞	....	Norwalk T. & R.	No sales today				
9	9	....	do pf.	No sales today				
10⅞	2½	....	Omnibus Corp.	No sales today				
36	30½	2.50	Otis Steel	600	35¾	34⅝	34⅝	— ⅞
18⅞	15⅜	1	Packard Motor Car..	52,900	18½	17⅝	18	— ½
14	6⅛	....	Peerless Motor Car..	800	12½	11½	11½	— 1⅛
26	21½	....	Pierce-Arrow	600	24⅛	24	24	....
73½	71	6	do pf.	No sales today				
43½	33	2.60	Raybestos Manhattan	200	40¾	40½	40¾	....
14⅝	10⅝	.80	Reo Motors	4,000	14⅛	13⅝	13¾	....
7½	4	....	Reynolds Spring ...	400	5½	5½	5½	....
36½	21½	....	Spicer Mfg. Co.	400	33½	33⅛	33⅛	— ¾
55⅞	38	3	do pf.	No sales today				
44	38	3.50	Stewart-Warner Spd.	1,100	40¼	39	39	— 1
47¼	40¾	5	Studebaker Co.	2,600	44	43¾	43¾	— ¾
122¼	116	7	do pf.	No sales today				
18¼	14½	.80	Timken Detroit Axle	2,200	17¼	17	17	+ ⅛
80½	70⅜	3	Timken Roller Bear.	7,200	79⅜	76⅜	77	— 1⅜
39	30⅝	2.50	Trico	2,400	38⅞	36¾	37¼	— 1
29⅛	21⅛	....	U. S. Rubber	7,100	28½	27	27½	+ ¼
53⅝	47¾	....	do 1st pf.	300	51½	50⅜	51¼	....
20⅞	16⅝	2	Warner Quinlan	2,900	19⅜	18⅞	18⅞	— ½
50¾	43⅜	2	Westinghouse A. B...	1,800	50⅜	49½	49½	....
36½	31	2	White Motors	400	34½	34⅜	34⅜	— ⅝
34¼	27	2.50	Wilcox Rich A	No sales today				
26	19½	2	do B	1,300	25¼	24¾	24¾	— ⅛
10⅞	7½	1.20	Willys-Overland	1,700	10¼	10⅛	10¼	+ ⅛
103	65	7	do pf.	No sales today				
75½	72½	4	Yale & Towne	No sales today				
22¼	12¾	....	Yellow Tr. and C. ...	8,000	22⅛	20½	20⅞	— 1⅛
96½	72	....	do pf.	No sales today				

* And stock.

NEW YORK CURB EXCHANGE

Sales		High	Low	Close	Net Chge
22500	Cities Service..	33	32⅝	32⅞	+ ¼
500	do pf	88¾	88½	88¾	....
	Con Dia Fibre..	No sales today			
2300	Cord Corp	11⅞	11⅛	11⅜	+ ¼
100	Doehler D C....	16⅞	16⅞	16⅞	— 1⅛
500	Durant Motor ..	5⅜	5⅜	5⅜	+ ⅛
	Fageol Motor...	No sales today			
	Fedders	No sales today			
	Federal Mogul..	No sales today			
100	Federal Screw..	36⅜	36⅜	36⅜	+ ⅜
	Fiat	No sales today			
	Ford Canada...	No sales today			
	Ford France....	No sales today			
3600	Ford Ltd	13⅜	12⅝	12⅝	— 1⅛
	Franklin Mfg...	No sales today			
	Gen Tire & Rub	No sales today			
	Gr'n'f'ld T & D.	No sales today			
	Hall Lamp	No sales today			
	Henney	No sales today			
	Hood Rubber...	No sales today			
	India Tire	No sales today			
	Isotta Fras	No sales today			
	Jaeger	No sales today			
100	Lakey	9	9	9	....
	McQuay Norris.	No sales today			
	Midland Steel..	No sales today			
	Nat Rub Mach..	No sales today			
600	Paramount Cab.	11	10½	10⅜	— ⅜
	Perfect Circle..	No sales today			
	Pines Winter...	No sales today			
	Pitt Plate Glass	No sales today			
	Rolls Royce Am	No sales today			
	Ross Gear	No sales today			
	Safe T Stat....	No sales today			
	Seiberling	No sales today			
20	Smith A O.....	169¾	169¾	169¾	+ 13½
	Sparks With	No sales today			
4630	Stutz Motor	2¾	2½	2¾	+ ⅛
1600	Thermoid Co...	23½	23	23½	+ ⅜
	Thompson Prod	No sales today			
100	Triplex	7½	7	7½	+ ⅜
900	Wayne Pump ..	13	12½	13	+ 1
200	West Auto	33¼	30	33¼	+ 3¼

N. Y. OVER-THE-COUNTER

6	Am Hard Rub	60	65
8	Dizon J Cruc	164	168
3.50	Doehler D C	36	..
7	do pf	83	..
	Eismann Magn	22	..
7	do pf	87	..
	Rolls Royce Am	..	13
	do pf	15	19
	Splitdorf Bet E	3	4

CHICAGO

Sales		High	Low	Last
100	Acme Steel	78	78	78
1250	Allied M I	19	18	18½
400	do pf	43	40	43
500	Auburn Auto	229½	225	225
4700	Bendix Aviation	40¾	39⅛	39¼
2300	Borg Warner	40½	39⅞	39⅞
100	do pf	98	97½	98
150	Chi Yellow Cab	27⅝	27½	27½
600	Cord Corp	12¼	11¾	11¾
850	Houdaille Hers A....	27¾	27¼	27½
2150	do B	25½	24⅞	24⅞
75	La Salle Ext	3½	3½	3½
50	Muncie Gr A	4	4	4
50	do B	3½	3½	3½
150	Mskg M S	18¼	18	18¼
50	Noblt Spk	48⅛	48⅛	48⅛
300	Ross Gr	36⅛	36	36⅛
200	Sterling M T	26	26	26
260	Van Sicklen	17½	17	17½
50	Wrchl pf	22	22	22
50	Wayne Pump	12	12	12
30	do pf	30½	30½	30½

CLEVELAND

148	Apex El	16½	16	16
10	Cent Alloy pf	107¾	107¾	107¾
20	Firestone pf	82	82	82
34	Miller Rubber pf	32½	32½	32½
50	Mohawk Rubber	12	12	12
30	Ohio Brass pf	74½	74½	74½
100	Seiberling Rubber ..	16	16	16
110	do pf	75	75	75

DETROIT

4635	Bower R B	11½	10¾	11
300	Cont Motors	8	6⅝	8
125	Det Gasket	26¾	26¾	26¾
1000	D Wm Gil	19⅞	19½	19⅞
1609	Det Motor Bus	7½	7⅛	7⅛
1305	Excello	22½	21¼	21¼
325	Federal Mot Truck..	11½	11	11
300	Houdaille Her B....	25	25	25
225	Hutto Eng	9⅞	9¾	9¾
1453	Kermath	9¾	9¼	9¾
150	Motor Bankers	19½	19½	19½
950	Pittsburgh Forge ..	20	19½	19½
1515	Packard Motor	18¼	17¾	17¾
200	Reo Motors	14	14	14
1220	Timken Axle	17½	17⅛	17⅛
395	Univ Prods	25⅛	24½	24½

GASOLINE PRICES

TANK WAGON PRICES

	Net tank wag'n	Road tax	Total tank wagon	Service station
Greater N. Y. C...	13.3	2	15.3	17.3
Syracuse	14.8	2	16.8	18.8
Rochester	14	2	16	18
Buffalo	13.8	2	15.8	17.8
Albany	14.6	2	16.6	18.6
Burlington, Vt....	15.3	4	19.3	21.3
Manchester, N. H.	14.4	4	18.4	20.4
Augusta, Me.	14.8	4	18.8	20.8
Boston, Mass.	13.5	2	15.5	17.5

Pennsylvania

	Net tank wagon	Total service station
Pittsburgh	15	21
Philadelphia	15	21
Allentown	15	21
Erie	15	19
Scranton	15	21

Prices in Other Markets

	Net tank wag'n	Road tax	Total tank wagon	Service station
Atlantic City	14.5	2	16.5	18.5
Newark	13.5	2	15.5	17.5
Annapolis	14.0	4	18.0	20.0
Baltimore	13.2	4	17.2	19.2
Cumberland	15.0	4	19.0	21.0
Washington	13.7	2	15.7	17.7
Danville	14.8	5	19.8	21.8
Norfolk	13.3	5	18.3	20.3
Petersburg	14.3	5	19.3	21.3
Richmond	13.7	5	18.7	20.7
Roanoke	15.0	5	20.0	22.0
Charleston	14.5	4	18.5	20.5
Keyser	15.1	4	19.1	21.1
Parkersburg	13.2	4	17.2	19.2
Wheeling	14.4	4	18.4	20.4
Charlotte	15.3	5	20.3	22.3
Hickory	15.8	5	20.8	22.8
Mt. Airy	15.5	5	20.5	22.5
Salisbury	15.7	5	20.7	22.7
Charleston	13.3	6	19.3	21.3
Columbia	15.2	6	21.2	23.2

Two cents per gallon discount off gasoline tank wagon price to dealers and commercial buyers.

SCRAP METALS

Aluminum—	Buying.	Selling.
Cast scrap	13 —13½	15 —15½
Sheet scrap	13½—14	15¼—15¾
Clippings	16½—16¾	18½—19¼
Copper—		
Heavy machin. comp.	10¾—11¾	12 —12½
Heavy and wire	13½—13¾	14¼ 14⅜
Light and bottom ..	12 —12¼	12¾—13
Auto radiators	8¼— 8½	9 — 9¼
Heavy cut and cruc.	13½—13¾	14¾—15
Brass, heavy	9 — 9¼	9½— 9¾
Brass, light	7⅜— 7½	8 — 8¼
No. 1 cl. br. turnings	9¼— 9½	10 —10½
No. 1 com. turnings	10 —10⅜	10½—11
Lead—		
Tea lead	2 — 2½	3⅜— 3¾
Lead, heavy	4¼— 5	5⅜— 5⅝
Stereotype	6 — 6¼	6⅞— 7⅛
Electrotype	4⅜— 4½	5⅛— 5⅜
Battery lead	2¼— 2⅜	2⅞— 3
Mixed babbitt	4½— 5	5⅛— 6⅜
Zinc—		
Zinc scrap	3½— 3⅜	3¾— 3⅞
New zinc cuttings .	4 — 4½	5⅛— 5¼
Tin—		
Block tin, scrap ...	34⅜—35¼	35¾—37½
Siphon tops	22¼—22½	25 —25¾
Tinfoil, pure	24⅛—25½	26⅛—28¼

LUBRICATING OILS

All prices cooperage f. o. b. New York. (1-inch immersion test.)

	Filtered D, 600	40 —	41
	Filtered E., 600	34½—	36½
	Unfiltered, 600 S. R.	31 —	..
	Unfiltered, 600 S. R.	35½—	..
	600 Flash, S. R.	36 —	..
	630 Flash	42½—	..
	Bright stock	47½—	..
RED ENGINE OILS—	(Viscosity at 100.)		
300	No. 6½ color	20 —	21
250	No. 6 color	18 —	20
200	No. 6 color	16 —	17
PALE ENGINE OILS—	(Viscosity at 100.)		
230	No. 3¾ color	22 —	24
180	No. 3¼ color	18 —	..
100	No. 2¼ color	.. —	16
MOTOR OILS—	(Viscosity at 100.)		
600	No. 7 color	30 —	32
500	No. 7 color	26 —	29
400	No. 6½ color	20 —	27
300	No. 6 color	23 —	24½
200	No. 6 color	21 —	22½

CALIFORNIA GOODYEAR SHOWS GAIN IN PROFITS

Los Angeles, Feb. 20.—Showing an increase of $410,601, or more than 21 per cent., in net earnings for 1929 as compared with 1928, Goodyear Tire and Rubber Company of California and wholly owned subsidiaries in the annual report issued February 17 by John W. Mapel, president, reported net profits of $2,293,567, after all charges and taxes for the year ended December 31, last, as against $1,882,965.60 in 1928.

The 1929 net earnings are equal to $28.68 a share on the 79,957 shares of $100 par 7 per cent. cumulative preferred stock outstanding, as against $23.55 a preferred share on the same number of shares outstanding at the end of 1928.

After payment of dividends of $559,699 on the preferred stock and $1,500,000 on the common stock, which is controlled by the Goodyear Tire and Rubber Company of Akron, O., surplus at the end of 1929 was $3,386,665, as compared with $3,652,796.97 after deduction of preferred dividends of $559,699 and common dividends of $2,000,000 in the previous year.

Net sales for 1929 were $26,233,596, compared with $26,109,252 in 1928. Unit sales of automobile tires were substantially greater than the previous year, although at lower selling prices, the report stated.

Net profits of the Goodyear Textile Mills Company for the year ended December 31, last, after all taxes and charges totaled $223,871, as compared with $236,073.76 for the preceding year, a decrease of slightly more than 5 per cent., according to the annual report issued by Mr. Mapel, president.

These earnings are equal to $11.71 a share on the 19,103 shares of $100 7 per cent. cumulative preferred stock outstanding, as compared with $12.35 a preferred share on the same number of shares in 1928.

In the Bus Field

Hackensack, N. J., Feb. 20.—The Bergen County Bus Company operating from Ridgewood, Paterson and New York via the 125th Street ferry, announces that it has replaced its equipment with new de luxe coaches and will have its New York terminal at the Times Square Motor Coach station.

Hartford, Conn., Feb. 20.—A. G. Mertz, service manager of the former Pierce-Arrow distributor, S. A. Miner, Inc., and who opened a service station on Edwards Street specializing in Pierce-Arrow service when that company passed out of the picture, has organized Yankee Stages, Inc., which is operating a bus line from Springfield to New York. The headquarters are in Hartford. Associated with Mertz in the formation of the company are Charles A. Barnett and Carl Orbann, Jr. Barnett has been in the bus game for the past ten years: five years in Detroit, two years in Florida and three years in New England. Yankee Stages, Inc., is employing steel buses and has several new buses on order.

Austin, Tex., Feb. 20.—The Motor Transportation Division of the Texas Railroad Commission has granted permits for the operation of motor bus lines to the following: W. P. Fite, intrastate and interstate, from Henderson, Tex., via Carthage, to Shreveport, La.; Southwestern Transportation Company, to operate interstate from Dallas to Texas-Arkansas state line on a route from Dallas to Camden, Ark.; Safety First Bus Company, Spearman, to operate from Spearman to Perryton.

MILLER STOCKHOLDERS VOTE MERGER APPROVAL

Akron, Feb. 20.—Miller Rubber Company preferred and common stockholders accepted the B. F. Goodrich Company offer of purchase yesterday. The vote to dissolve Miller was taken, though litigation may result and suits to prevent sale may be filed within the next few days. The deal will go through in stock exchange as agreed by committees appointed following the Miller directors' acceptance of the offer.

RUBBER PRICES

RUBBER EXCHANGE OF NEW YORK

	High.	Low.	Feb. 19.	Feb. 18
February	....	....	†16.20	16.10
March	16.60	16.30	†16.30	16.30
April	....	....	*16.50	16.50
May	17.00	16.70	†16.80	16.70
June	....	....	*17.00	16.90
July	17.40	17.10	†17.20	17.10
August	....	....	*17.30	17.20
September	17.70	17.40	†17.50	17.40
October	17.80	17.70	17.60@17.80	17.60
November	....	....	*17.80	17.70
December	18.30	18.00	†18.00	17.90
January	....	....	18.20	18.10
Spot	....	....	*16.40	16.30
Sales (tons)	....	....	1,600	1,607½

Transferable notices so far, 20. Market closed steady.

*Nominal. †Trading. ‡Bid.

OUTSIDE CLOSING PRICES

(Per pound delivered New York.)

PLANTATION—	Bid.	Asked.
Ribbed Smoked Sheets—		
Spot	16¼	16½
February	16¼	16½
March	16⅜	16⅝
April-June	16⅜	17⅛
July-September	17½	17¾
October-December	18	18¼
SPOT—		
First latex	16⅞	16⅝
Thin pale latex	16⅜	16⅞
Clean thin brown crepe	14⅝	15
*Specky crepe	14⅜	14⅝
Rolled brown crepe	10⅜	10⅝
No. 2 amber	15	15¼
No. 3 amber	14⅜	15⅛
No. 4 amber	14⅝	14⅞
*PARAS—		
*Up-river, fine, spot	16¾	17
do, coarse	8½	8¾
*Acera, fine, spot	17¼	17½
*Caucho Ball—Upper	8¼	8½
CENTRALS—		
*Esmeralda	8¼	..
*Central scrap	8¼	..
Guayule, washed, dried ..	..	15
‡BALATA—		
*Block Ciudad	40	41
*Surinam sheet	51	52
*Manaos block	42	43
Peruvian block	18	18½

*SCRAP RUBBER

(Dealers' buying prices, f. o. b., N. Y.)

Boots & shoes, black, ton	$16.50	@18.00
Arctics, cwt	.50	@ .60
Inner tubes, mixed, cwt ..	3.00	@ 3.25
Inner tubes red, cwt.....	3.25	@ 3.37½
Tires, stand'd mixed, ton.	10.00	@11.00
Inner tubes, No. 1, cwt ...	6.12½	@ 6.25
Inner tubes, No. 2, cwt ..	3.00	@ 3.12½
Mixed hose, soft, cwt	.40	@ .45
Hose, air brake ton	10.00	@12.00

*Nominal. ‡Sold on sample only.

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WE could build more, but not better axles than our present

CLARK AXLES

Production demands of the larger passenger vehicle and truck manufacturers have increased our axle production schedules steadily. This marks an ever-growing appreciation of the standard to which we build.

The same precision of design and workmanship produces

CLARK METAL WHEELS

with Strength of Steel.

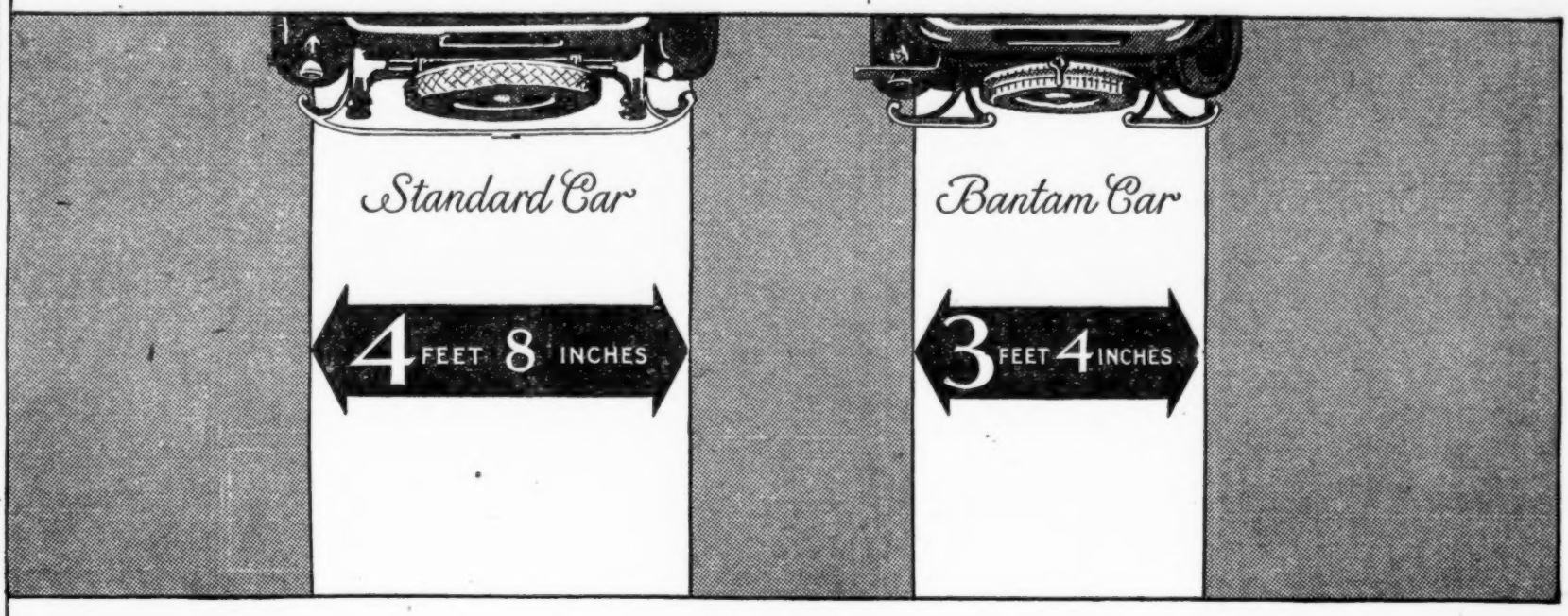
CLARK EQUIPMENT COMPANY

Buchanan Michigan

AXLES Front & Rear WHEELS Single or Dual Tire CAST STEEL HOUSINGS TRANSMISSIONS

AMERICAN AUSTIN

the bantam–car...that will



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The tread of the American Austin writes the story of a car that will do forty miles on a gallon of gasoline, forty miles an hour in second, and over fifty miles an hour in high.

You know the motor car business. You know the trade situation today. Consider the possibilities of this fast efficient bantam car in your territory.

Smartness without loss of comfort or utility will be the keynote of its design.

It will be 25 per cent smaller in size than any other established model in the small car field.

IT WILL RUN 10,000 MILES

ON $56 WORTH OF GAS AND OIL

The bantam Austin will carry you 10,000 miles for $56 worth of gas and oil.

It will afford the economy of less than one-half the operating and upkeep cost of the average small car and its price will be under $450.

The American Austin will be incomparably the easiest car to handle in traffic. The soundness of its mechanical design is proved by the 450 cups and medals the Austin has won in competitions with the world's finest cars during the past seven years.

Realize that this bantam car can be sold to present car owners for use in connection with their large car, not in place of it. Thus it avoids trade-ins. It will have a smartness that will be welcomed by young-minded America. Its economy will appeal to the thrifty.

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THE AMERICAN *Austin*